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The Trojan War has transfixed me since the third grade, when a librarian handed me *Tales of the Greeks and Trojans*, a gorgeous book illustrated by sisters Janet and Anne Grahame Johnstone. On the cover, Achilles, clad in golden armor, squares off against Hector, who is wearing a shining helmet: The action was intense, and I was hooked.

At first, it was just a gripping story of a war fought over the most beautiful woman in the world, but years later when I returned to the Trojan War through *The Iliad*, the story grew deeper. More than just a beautifully illustrated action sequence, the poem was now a thematic clash between wrath and honor as heroes stared down their fates on the battlefield.

I revisited *The Iliad* in preparation for this month's cover story. This time the epic was more than just a story. It was a window through which one could view ancient Greece to examine what was important during that time. To which objects is the author devoting time and attention? What qualities are embodied by his heroes? Through this lens, *The Iliad* becomes a valuable primary document, one that has survived for millennia because of its ability to engage, to give historians valuable perspective into the past.

Amy Briggs
Amy Briggs, Executive Editor



PETER HORREE/ALAMY



HISTORY

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National Geographic History (ISSN 2380-3878) is published bimonthly in January/February, March/April, May/June, July/August, September/October, and November/December by National Geographic Partners, LLC, 1145 17th Street, NW, Washington, DC 20036. Volume 6, Number 6. \$29 per year for U.S. delivery. Periodicals postage paid at Washington, DC, and additional mailing offices. **SUBSCRIBER:** If the Postal Service alerts us that your magazine is undeliverable, we have no further obligation unless we receive a corrected address within two years. **POSTMASTER:** Send address changes to *National Geographic History*, P.O. Box 37545, Boone, IA, 50037. In Canada, agreement number 1000010298, return undeliverable Canadian addresses to *National Geographic History*, P.O. Box 819 STN Main, Markham, ON L3P 9Z9.



DRUG BUST

The Chinese official Lin Zexu (center) oversees the destruction of imported opium in 1839 in this 19th-century Chinese engraving.

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16 The Lost Civilization of Jiroft

In 2001 floods near Jiroft, Iran, exposed the ruins of an ancient necropolis. It belonged to an undiscovered culture that flourished in 2500 B.C., alongside the world's oldest cities in Mesopotamia and the Indus Valley.

28 Armed and Dangerous in *The Iliad*

Helmets, shields, and weapons dominate Homer's epic poem about the Trojan War, especially in the dramatic scenes when Achilles and Hector don their armor to prepare for a duel to the death.

40 The Roads That Led to Rome

At the peak of Rome's power, 200,000 miles of roads kept the lifeblood of empire flowing from its heart to the extremities. Many modern European highways still follow the course of one of the Roman Republic's greatest legacies.

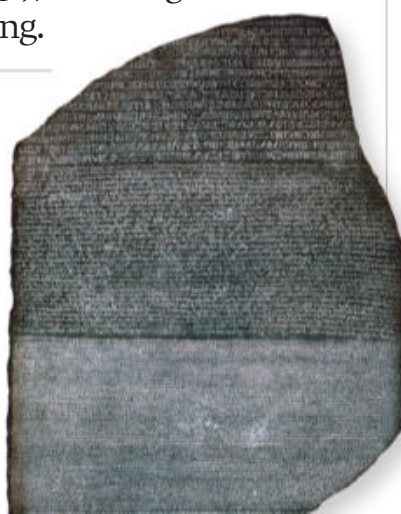
54 The Opium Wars

China's attempts to end Britain's destructive—but lucrative—opium trade unleashed the might and fury of the Royal Navy in 1839, resulting in a humiliating defeat for China and the loss of Hong Kong.

70 Napoleon's Egyptian Victory

Napoleon's 1798 invasion of Egypt ended in military failure, but his far-sighted deployment of an "army" of scholars heralded the triumphant birth of Egyptology.

THE ROSETTA STONE, DISCOVERED BY FRENCH SCHOLARS IN EGYPT IN 1799. BRITISH MUSEUM, LONDON



Departments

6 PROFILES

Rogue Numidian Jugurtha seized the throne in 118 B.C. by killing

his rivals, bribing Roman officials, and dragging Rome into a costly war. His ambition paved the way for the crisis that would bring down the Roman Republic.

10 WORK OF ART

Carved from ivory in the 1500s, a saltcellar from West Africa depicts

men carrying a European ship. Only 10 inches high, it was one of a limited-edition set made for Portuguese merchants by royal craftsmen in the ancient kingdom of Benin.

12 DAILY LIFE

The first roller skates were clumsy and slow, so inventors made them

sleeker, speedier, and safer. Later impresarios built rinks, and in the 1880s America's first full-blown skating craze was on a roll.

90 DISCOVERIES

The permafrost of Russia's Pazyryk Valley trapped ancient

Scythian burials in an icy time warp. Starting in the 1920s, Soviet archaeologists dug into the frozen mounds to find perfectly preserved grave goods and tattooed mummies.



SUNKEN TREASURE. A team member recovers what is believed to be a grindstone. After the first discovery of Indigenous tools on Australia's continental shelf, archaeologists and Indigenous leaders believe Australia's Underwater Cultural Heritage Act needs to be updated to protect not only modern sites, like sunken aircraft and shipwrecks, but prehistoric sites as well.

HIRO YOSHIDA, FLINDERS UNIVERSITY



NG MAPS

THE MURUJUGA is the traditional Indigenous name for the peninsula and coastal islands (also called the Dampier Archipelago) in Australia's Pilbara region. Many ancient Australian sites have been found in the Murujuga area.

MARINE ARCHAEOLOGY

Indigenous Australian Past Found Underwater

First proof that such sites exist is expected to spur further research on Australia's continental shelf, opening up a new watery frontier.

Archaeologists have long speculated about human settlement on Australia's northern continental shelf, a stretch of now submerged land that extends 100 miles from the current coastline. Forty years ago, a search for evidence was unsuccessful, leaving the question open.

A new effort, drawing on the expertise of Australian universities and Britain's University of York, in partnership with the Murujuga Aboriginal Corporation, recently set out to try again. The project centered on the Dampier Archipelago in Western Australia. Even knowing that this area abounds with Indigenous rock

engravings, doctoral students John McCarthy and Chelsea Wiseman were surprised by what they found in the aquamarine waters of Cape Bruguieres in July 2019.

"I was stunned when I saw the tools in a little pothole on the seabed," said McCarthy. When he surfaced shouting "lots of definite lithics (stone



MARINE ARCHAEOLOGISTS IN
A BOAT SURVEY THE WATERS
OF THE DAMPIER ARCHIPELAGO,
AUSTRALIA. MORE THAN 200
ANCIENT STONE TOOLS WERE
DISCOVERED HERE.

JEREM LEACH, FLINDERS UNIVERSITY

tools),” colleagues on the dive boat thought he was joking.

What they found—269 stone tools, including hammer stones, scrapers, knives, and two likely grindstones—are similar to those discovered on dry land. Their location proves that ancient Indigenous Australians once occupied the land, now submerged, on the continental shelf. Radiocarbon dating and analysis of sea-level changes show the site is at least 7,000 years old.

At the end of the last ice age 12,000 years ago, sea levels were much lower than today, exposing more habitable land. As the Earth warmed and sea levels rose, a long process that con-

cluded about 6,000 years ago, one-third of prehistoric Australia, including these coastal settlements, was flooded.

“Now deep-time archaeologists have to focus on watery and not just terrestrial landscapes to understand human history and marine migrations,” said Jonathan Benjamin, associate professor at Flinders University in Adelaide, who led the project.

Broader Implications

The discovery is significant beyond Australian shores. Of the 3,000 seabed prehistoric sites in the rest of the world, this one is the first located in a tropical zone, where ancient

A MIX OF OLD AND NEW

THIS LATEST SEARCH for underwater ancient archaeological sites in Australia succeeded thanks to a novel mix of high- and low-tech methods. Researchers began by focusing on an area rich in on-shore archaeology and rock art to improve chances of underwater finds. From there, they deployed high-tech tools: satellite image analysis, airborne lidar, drone photography, and subsea acoustic mapping. On the low-tech side, they spoke with local archaeologists and the people from the local Indigenous community, both fishermen and elders, to glean information about possible locations. Intertidal scouting on foot and around the island by boat also played a part. Collecting information took roughly three years, while the actual diving involved three weeks. “It’s slow going. You have to be a bit good and a bit lucky,” said Jonathan Benjamin, the project leader. Once a dive location is targeted, the tricky work of spotting artifacts begins. “Historical shipwreck specialists would pass right over them,” Benjamin noted, adding that a scientific diver is trained to distinguish between what was made by nature and what was made by humans.



A FLAKE TOOL
USED FOR CUTTING, FOUND
ON THE SEABED AT CAPE
BRUGUIERES, AUSTRALIA

JONATHAN BENJAMIN, FLINDERS UNIVERSITY

remains are harder to find. Coasts that were mangrove forests either have too little sediment, which allows artifacts to wash away, or too much, which buries them.

“The techniques used in this project make it possible to find continental shelf remains of hominins throughout the tropics for the first time,” said

Nicholas C. Flemming, visiting research professor at the National Oceanography Centre in Southampton, England, who did not participate in the project.

For project leader Benjamin, the submerged past is now a new priority for historians in Australia: “This is the final frontier of archaeology.” ■

Jugurtha, the King Who Bought Rome

Bribery, murder, and brilliant strategy tightened Jugurtha's grip on his North African kingdom, drawing Rome into an extended conflict that weakened the foundations at home.

Ruthless and Rebellious

134 B.C.

Jugurtha, nephew of King Micipsa of Numidia, fights bravely with Roman troops in Spain, making powerful Roman connections.

118 B.C.

Micipsa dies and leaves Numidia to his two sons and Jugurtha. Jugurtha will dispense with both rivals and seize power himself.

111 B.C.

After failed attempts to subdue Jugurtha, Rome invades, but Jugurtha bribes his way to an advantageous peace.

107 B.C.

After Jugurtha continues to evade capture, the plebeians appoint a new military commander, Marius, to defeat him.

105 B.C.

Marius captures Jugurtha and takes him to Rome, where he is paraded in chains and dies in prison.

Struggling to subdue the people of Spain in 134 B.C., Roman general Scipio Aemilianus realized he needed more troops. He turned to Numidia, a North African ally whose ruler, Micipsa, was glad to provide Numidian soldiers. A loyal ally of Rome in its recent victory over Carthage, Numidia (located in parts of modern Algeria, Tunisia, and Libya) had an underlying motive for helping Rome: Micipsa could send his nephew Jugurtha to command Numidia's forces. Charismatic, clever, and aggressive, Jugurtha represented a threat to Micipsa's throne and his two sons. Assisting Rome in Spain would conveniently put Jugurtha in harm's way. Perhaps he would never return.

But Jugurtha did return after a decisive Roman victory at Numantia with a glowing letter of recommendation from Scipio. His military and political reputation enhanced, Jugurtha had also established valuable Roman connections. To diminish his threat to the throne, King Micipsa decided to adopt his nephew and include him in a three-way split of the kingdom with his biological sons, Hiempsal and Adherbal.

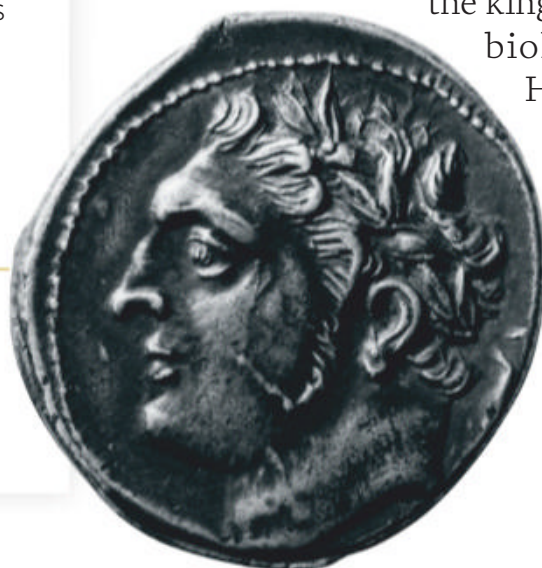
Jugurtha's ambition was undeniable, and he would not be content to co-rule with his adoptive brothers. Most of what is known about Jugurtha's life comes from two Roman historians: Sallust and Plutarch, who recorded how he employed bribery, treachery, and murder in ruthless pursuit of sole control of Numidia. The civil conflict, the Jugurthine War, would turn into a costly distraction for Rome that exposed the corruption eating away at the heart of the Roman Republic.

Family Affairs

After the death of Micipsa, Jugurtha immediately contested the division of power. Gathering his soldiers, he sent them to Hiempsal's quarters where they ransacked the house, killed anyone who resisted, and discovered Hiempsal hiding in the cell of a maidservant. As ordered by Jugurtha, they cut off Hiempsal's head.

Adherbal fled to Rome, where he declared to the Senate that Jugurtha was a traitor and had murdered his own brother. He demanded punishment, and the Senate set up a commission to investigate. Quoted in Sallust's first-century B.C. work, Jugurtha describes Rome as "*urbem venalem et mature perituram, si emptorem invenerit*—a city for sale and doomed to speedy destruction if

Jugurtha's murderous path to power helped destabilize the Roman Republic.



NUMIDIAN COIN BEARING THE IMAGE OF JUGURTHA. NATIONAL LIBRARY, PARIS
AKG/ALBUM



JUGURTHA DEFEATED

PLUTARCH recorded the ultimate fate of Jugurtha in his "Life of Marius," included in his second-century A.D. work *Parallel Lives*.

Marius celebrated his triumph, exhibiting to the Romans Jugurtha in chains . . . When [Jugurtha] was cast into prison, some were so eager to snatch away his golden earring that they tore it off with his ear. And when he had been thrust down naked into the dungeon, with a grin on his lips he said: "Hercules! How cold this Roman bath is!" After struggling with hunger for six days, the wretch paid the penalty which his crimes deserved.

JUGURTHA IN CHAINS. GIOVANNI BATTISTA TIEPOLO, 1729. METROPOLITAN MUSEUM OF ART, NEW YORK
QUINTLOX/AURIMAGES

it finds a purchaser"—a valuable lesson he learned during his time with Roman troops in Spain. To fight his adoptive brother's accusations, Jugurtha applied this lesson and bribed his friends in the Senate. The commission decided to split Numidia between Jugurtha and Adherbal, each man in charge of his own section. Jugurtha's role in the assassination of Hiempsal was overlooked.

Encouraged, Jugurtha turned to building up his forces at home and then securing the throne for himself. He attacked

Adherbal and pushed his forces back. Adherbal retreated, secured himself in Cirta, the capital of his portion of Numidia, and appealed to Rome for help. Jugurtha's armies besieged the walled city of Cirta, sealing it off from any shipments of food or supplies.

Sallust recorded how Adherbal begged Rome to deliver him from "the inhuman hands" of Jugurtha, but Roman envoys failed to bring Jugurtha to terms. Adherbal surrendered, trusting that the status of the many Romans trapped with

him in Cirta would make Jugurtha act mercifully. Undeterred, Jugurtha took the city, tortured Adherbal to death, and killed the adult occupants of the city, including those of Italian descent.

Money Talks

In killing the Roman occupants, Jugurtha crossed a line. Facing a popular outcry, the Senate declared war against him and sent troops to fight the rogue Numidian king in 112 B.C. The decision surprised Jugurtha, Sallust wrote, because "he had

NUMIDIA'S SHORT LIFE

THE KINGDOM that Jugurtha strove to rule alone arose during the Second Punic War fought between Rome and Carthage in the third century B.C. Allying himself with Rome, Jugurtha's grandfather, King Masinissa, united the region under his rule as the kingdom of Numidia. His land prospered, and following Rome's destruction of Carthage in 146 B.C., Masinissa's son, Micipsa, continued ruling as a Roman ally. His division of the kingdom into three provoked the Jugurthine War. The kingdom made the wrong call during the Roman civil wars in the first century B.C. when King Juba I sided against Julius Caesar. Following Caesar's victory and rise to power, Numidian independence ended.

NUMIDIAN LIGHT CAVALRY, TRAJAN'S COLUMN
(19TH-CENTURY REPLICA)
WHITE IMAGES/SCALA, FLORENCE



a firm conviction that at Rome anything could be bought." Even so, Jugurtha probably had reason to believe he could win over Rome again because Rome's existing conflicts with Germanic tribes closer to home made fighting with him in North Africa less of a priority.

Lucius Calpurnius Bestia led Roman forces in North Africa in 111 B.C. Bestia's

campaign began with victories but was undone by bribes. Jugurtha doled out bribes to the invading forces. He warned Bestia that a prolonged war was the last thing Rome wanted. His tactics paid off: When Jugurtha surrendered to Bestia, the terms were very favorable to him.

Despite sparing Rome from war, this arrangement was seen as a great dishonor

by the Roman public. Gaius Memmius, tribune of the plebeians (described by Sallust as "a man fiercely hostile to the power of the nobility"), accused the aristocrats in the Senate of accepting Jugurtha's bribes.

A New Commander

Jugurtha was again brought from Numidia to Rome to defend himself against the accusations. During his visit, he bribed officials in a bid to ease his sentencing process. He was promised safe passage home, but before he left, Jugurtha found a royal Numidian cousin, and rival to the throne, living in Rome and had him killed.

The murder of a prince under protection of Rome was a provocation too far. In 110 B.C. war was renewed with more experienced generals, during which Rome's rivalry between nobles and plebeians intensified.

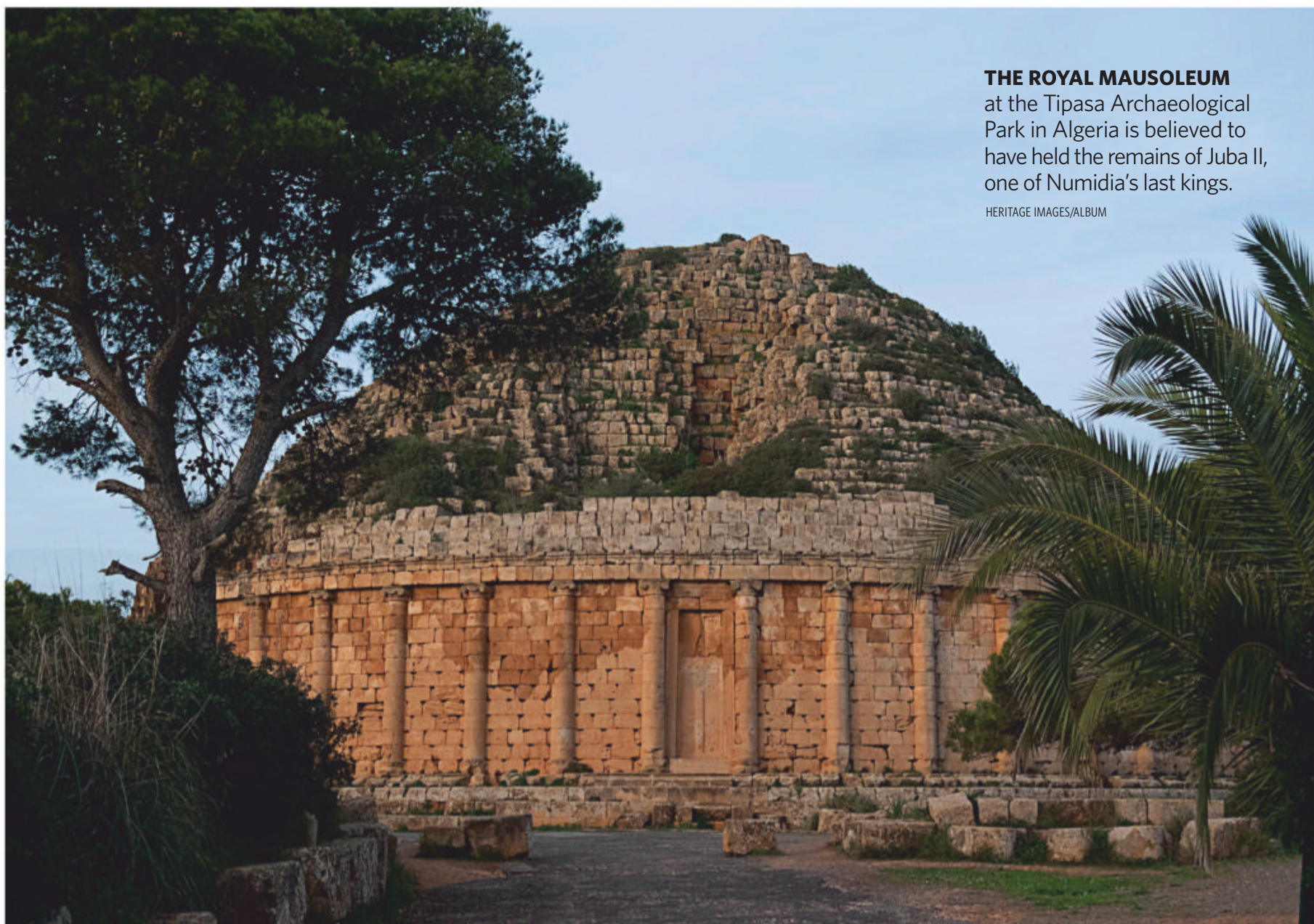
The consul Quintus Metellus won significant victories over Jugurtha, but

ROME FOR SALE

JUGURTHA used bribery to secure power, but Sallust recorded that his first Roman commander advised him otherwise: Scipio "privately advised the young man . . . not to form the habit of bribery. It was dangerous, he said, to buy from a few what belonged to the many."

JUGURTHA CURSES ROME (20TH-CENTURY ILLUSTRATION)
BRIDGEMAN/ACI





THE ROYAL MAUSOLEUM
at the Tipasa Archaeological Park in Algeria is believed to have held the remains of Juba II, one of Numidia's last kings.

HERITAGE IMAGES/ALBUM

was unable to capture him. In 107 B.C. the plebeians wrested the command in Numidia from Metellus and gave it to his subordinate, Gaius Marius. The new commander had just been elected consul partly on the strength of his modest roots and promises to tackle corruption.

Marius was gifted with formidable military skills, and was popular among the troops. Yet even Marius had difficulty capturing Jugurtha, who had persuaded his father-in-law, Bocchus, king of Mauretania, to shelter him.

With great diplomatic and military flair, Jugurtha drew Roman troops into a wearying game of cat and mouse. It was only in 105 B.C. that Rome managed to strike a deal with Bocchus. In return for control of a large portion Numidia, Bocchus handed over his errant son-in-law. Writing in the first-century A.D., Roman historian Plutarch recounts in his "Life of Marius," in *Parallel Lives*, that the subdued Jugurtha was paraded in chains

through Rome and imprisoned, where he died sometime afterward of starvation.

Jugurthine Legacy

Although Rome's military might crushed Jugurtha, his courage, craftiness, and brilliant guerrilla tactics are a remarkable chapter in the annals of Rome's military history; Jugurtha's true motivations in provoking this conflict are unclear in the historical record. Some assume he wanted to free Numidia from Roman influence. Others believe his aim may have been to reinstate himself as an ally of Rome.

The historian Sallust's account is often cited as the main source for Jugurtha, and Sallust's background colors his account. A nonaristocrat, Sallust was elected tribune, but his career was cut short by infighting when he backed a rival of Julius Caesar in the civil wars of 49–45 B.C. His subsequent career as a historian was colored by his relatively humble roots and

focused on the corruption and arrogance of the aristocratic elite.

His preoccupations found a perfect theme in his history of the Jugurthine War, written circa 40 B.C. Historian Gareth C. Sampson, author of *The Crisis of Rome: The Jugurthine and Northern Wars and the Rise of Marius*, argues that "Sallust had an ax to grind about the decay of Roman elite society, and Jugurtha was a prime example that he could exploit to 'prove' his case."

Jugurtha's legacy certainly supports Sallust's interpretation of events. After the Jugurthine War, the plebeian assembly used Jugurtha's bribes and the Senate's incompetence to gain power through brilliant soldiers like Marius. The erosion of senatorial power in favor of individual generals would increasingly destabilize the Roman state and lead to the civil war that gave rise to Julius Caesar.

—Juan Pablo Sánchez

The King's Ivory: Benin Saltcellar

The powerful king, or *oba*, of Benin granted Portuguese traders special access to the artistry of the ivory saltcellars created by the craftsmen of his court.

Carved from an elephant tusk, an intricate ivory saltcellar stands only 10 inches high, but its myriad details make a massive impact. Four European males—two richly attired men and their servants—support a receptacle for salt, which is in turn crowned by a ship. Housed today in Paris, France's Quai Branly Museum, the saltcellar was fashioned around the 16th century by the highly trained artisans in Africa's ancient kingdom of Benin (in what is modern Nigeria).

According to Kathy Curnow, associate professor of African art history at Cleveland State University, saltcellars like this one were made by a small group of artists (six or seven men) who belonged to a hereditary, male-only guild of ivory carvers. Their highly sought skills were passed down through the generations through demanding apprenticeships: "Growing up watching their elders' techniques gave them a facility with ivory that surpassed that of contemporary European artists who had less access to this material," Curnow said.

In 1485 Portuguese traders became the first Europeans to contact the kingdom of Benin, one of the oldest and most highly developed states in West Africa. Benin's kings were known as obas, who held court at Edo, later called Benin City (located about 200 miles east of modern Nigeria's largest city, Lagos). In the 15th and 16th centuries, an oba's relationship with the Portuguese centered on trade. The Portuguese traded firearms, cloth, cowrie shells, coral, and alcohol for slaves, leopard skins, and pepper.

Among the goods the Portuguese also sought were beautiful carved items of ivory made by Benin's artisans. The oba allowed his craftsmen to fulfill Portuguese requests for ivory souvenirs, in the form of carved saltcellars, spoons, and hunting horns—the first pieces of African art produced for sale abroad as exotic objects. This saltcellar (right) is one of four similar ivory pieces that are held in different collections around the world, including the Metropolitan Museum of Art and the British Museum, as exemplary pieces that highlight the skill and workmanship of Benin's artists. ■

HIDDEN CHAMBERS FOR SALT ARE SKILLFULLY DISGUISED BY THE BENIN ARTISANS' DETAILED CRAFTSMANSHIP.



PHOTOS: MICHEL URTADO-THIERRY OLLIVIER/RMN-GRAND PALAIS



CROW'S NEST

A sailor peers from the crow's nest, while another climbs up the rigging. The figures are not depicted to scale and appear larger than the boat.

CARAVEL

The ship's design is medieval, nothing like the 15th-century Portuguese ships. The round anchors are raised, suggesting the artist relied on an illustration.

PORTUGUESE FIGURES

The four male figures represent the Portuguese, with beards and prominent noses. Their heads are disproportionately large, typical in Benin art.

MASTERS AND SERVANTS

Two richly attired men face straight out, a pose of dignity in Benin, while their servants are shown in three-quarter profile.

COSTUMES

The masters' clothing and weapons get careful attention, reflecting their importance. From the hats and doublets to the embroidered stockings, no detail is ignored.

Roller-Skating: A Skate for All Seasons

Ice-skating had long been a winter pastime, but the invention of roller skates created a craze that could last all year long.

The series of roller-skating crazes in recent memory make it seem a quintessentially 20th-century phenomenon, but wheeled shoes first rolled out as early as the 1700s. As models changed and improved over the years, skating fads bloomed in Europe and the United States throughout the 19th century.

The precursor to roller-skating—ice-skating—is vastly older and can be dated as far back as 1800 B.C. Archaeologists found evidence that people in Scandinavia fashioned ice skates from animal bones, pioneering the oldest human powered means of transport.

In-line Adventures

One of the first recorded attempts to put wheels on shoes took place in the 1700s. An unnamed Dutchman strapped to his shoes strips of wood with wooden

spools on the bottom, known as “skeelers.” They quickly broke.

Another famous early attempt to skate on wheels was made by an eccentric Belgian inventor, John Joseph Merlin. Merlin’s invention featured metal wheels arranged in a line, like the blade of an ice skate, on the bottom of a wooden sole.

Renowned for his museum of clocks, musical instruments, and automatons, Merlin lived in London where he was a favorite at high society parties. At a masquerade ball in 1760, he reportedly played a violin as he attempted to glide around on roller skates. Unable to control his speed or direction, he crashed into a large mirror and shattered it. The violin was destroyed, and Merlin was injured.

Another Belgian inventor took a crack at roller skates around 1790. While living in Paris, Maximiliaan Lodewijk van Lede attached wooden wheels to an iron sole



IN THE 1880S as the roller-skating craze spread in cities and towns across the United States, roller rink advertisements showed people of all ages having fun on four wheels.

BRIDGEMAN

SMOOTH RIDE

DESIGN MILESTONES in early roller skates sought to give users greater control. The Plimpton quad skate of 1863 made turning easier, and ball bearings were introduced in 1884 to engineer a smoother ride. While the first toe stop was patented in 1876, it didn’t become a regular feature of roller skates until the mid-20th century.

A CATALOG DRAWING OF A BRAKELESS ROLLER SKATE.
THE ILLUSTRIOUS UNIVERSE, 1878

BRIDGEMAN/ACI



plate and dubbed it the *patin à terre*, or land skate. Van Lede’s work did not get much attention, perhaps because he had to flee Paris during the French Revolution and leave behind his invention.

The first patented roller skate was designed by French inventor C.-L. Petibled. His skate was a wooden sole with three wheels attached in a line. Straps held the skates to people’s feet. Four years later, Robert John Tyers received the first English roller skate patent. His “Volito” sported a row of five wheels, with slightly larger center wheels to enable maneuvering by shifting weight to the front or rear. The Frenchman Jean Garcin used



the same idea with his three-wheeled skate in 1828. These early skates were not very maneuverable. Despite improvements made to the design, it was difficult to do anything other than travel in straight lines or turn in wide circles.

Parisian inventor Louis Legrand was the first to rethink the in-line approach, designing the so-called quad skates which had four wheels attached in two rows at the heel and the ball of the foot. Legrand skates were used in the 1849 production of Giacomo Meyerbeer's opera *Le Prophète* at the Paris Opera, creating a major sensation. A later performance at London's Covent Garden boosted their popularity even further.

Legrand's skate was the precursor to what became the standard design for roller skates for decades. Developed by an American inventor, James Leonard Plimpton, this four-wheeled design made roller-skating easier and more fun. The owner of a machinery factory in New York, Plimpton was advised by his doctor to take up ice-skating to improve his health. To skate in warmer weather, he invented a roller skate that could be used in all seasons.

Patented in 1863, his two-by-two "rocker skate" allowed the wheels to move independently of the sole, which made for easier navigation and turning. Each pair of wheels was attached to a

pivot with a rubber cushion, which allowed the skate to rock and required that skaters only shift their weight to turn.

Writing more than a decade after the invention of the Plimpton skate, the British literary weekly *All the Year Round* said, "[T]he immense superiority of those skates over everything invented up to the present time has induced wholesale piracy." With various improvements, this basic model would stay the most popular roller skate for more than a century.

Skating Crazes

Plimpton's skates made skating so easy that they sparked the first roller-skating

HELL ON WHEELS?

IN THE UNITED STATES the roller-skating craze of the 1880s was both embraced and feared. Public rinks had begun appearing in cities like New York since the 1860s. By the 1880s the craze had even spread to the West. In 1885 McCarty's Rink opened in Dodge City, Kansas (it also doubled as an opera house). Older generations grew concerned about roller-skating's effects on young people's morality. In an 1885 article in the *Carlisle Weekly Herald* in Pennsylvania, some preachers called skating rinks "pits of perdition." A satirical cartoon even suggested that pastors incorporate skating into their sermons to attract more congregants.

SKATING MINISTER IN AN AMERICAN WOOD ENGRAVING FROM 1885
GRANGER/AURIMAGES



craze among young people. Starting in the 1860s, roller rinks began to pop up in large towns and cities across western Europe and the United States, where the first public roller rink opened in 1866 in the Atlantic House, a seaside resort in Newport, Rhode Island.

To encourage the perception of roller-skating as a refined pastime, Plimpton promoted the sport as a "proper" activity for

ladies and young gentlemen, rather than for the masses. With a live orchestra and then-uncommon electric lights, skating rinks became the perfect place to see and be seen in the latest fin de siècle fashions. The rinks became so popular that they competed with ballrooms. In 1876 *Le Monde Illustré* spoke of the "delirium on wheels" that gripped Paris, while the London press dubbed the new devotees of roller-skating "rinkomaniacs" and "rinkualists."

The medical profession felt compelled to evaluate the effects of roller-skating.

In 1885 *Scientific American* concluded that "the pathological outcome" was small in proportion to the number of people who had "engaged in propulsive divagations upon polished floors."

During this period, roller-skating began to be recommended as an alternative form of urban transportation in Britain, where London businessmen and even ladies could be seen roller-skating to work. The sport of roller polo, an early version of roller hockey, emerged in both the United States and England, and other organized events such as dance skating competitions and speed contests developed around the same time.

By 1880 London was said to have had 70 roller rinks; Paris had 40; New York City at least 20. No major town was without one. At the turn of the 20th century, huge rinks were built in the Chicago Coliseum and New York City's Madison Square Garden, signaling the

Nineteenth-century roller skate design featured some peculiar variations with short histories.

INSPIRED BY THE TRICYCLE, THE THREE-WHEELED SKATE DESIGNED BY ENGLISHMAN J. F. WALTERS IN 1882 FAILED TO CATCH ON. WHA/AURIMAGES





PASSERSBY watch as a woman and a young girl skate on a Berlin street, in a 1910 photograph by Conrad Huenich, who captured moments of leisure in the German capital.

ULLSTEIN BILD DTL/GETTY IMAGES

pinnacle of the first roller-skating craze.

Roller-skating's popularity waxed and waned in the coming decades, going through numerous up-and-down cycles. During the Edwardian era and the Roaring Twenties, young people flocked to roller rinks to skate and flirt. Skating even began showing up on silent movie screens, including Charlie Chaplin's 1916 film *The Rink*.

Families were also catching on to the roller-skating phenomenon for outdoor recreation. As many dirt roads were paved, skating's popularity could spread beyond cities. Children skating into town became commonplace, along with complaints from older generations about disregard of street laws and dangerous maneuvers. Unsurprisingly, skating injuries shot up.

After the Great Depression and World War II, roller-skating entered a "golden age" in the United States, where it

became the biggest participation sport. At its peak, there were some 5,000 rinks and 18 million skaters. Fans flocked to watch Roller Derby: In the late 1940s full-contact matches began to be televised every week.

Improving Designs

Over the years, innovators sought to improve the quad skate, adding ball bearings to wheel construction in the 1880s, which made for a smoother ride. Attempts at competing with the basic quad design, however, failed to catch on. Englishman J. F. Walters' 1882 three-wheeled skate, inspired by the tricycle, or the Parisian Charles Choubersky's 1896 bicycle skate, featuring two small bicycle wheels, proved unsuccessful.

Other roller skate innovations did catch on by improving skaters' ability to turn and control their speed. The standardization of toe stops in the mid-

20th century, made slowing down and stopping much easier. Wooden wheels eventually gave way to metal and rubber. When polyurethane wheels became the standard, traction improved, and the roller-disco craze exploded in the 1970s.

In the 1980s a return to the in-line skating model sparked another craze. Two ice hockey-playing brothers designed an in-line skate to mimic the action of their ice hockey skates. Their invention, which they dubbed the Rollerblade, drove a skating resurgence centered on athletics. In-line skating competitions and roller hockey surged in popularity.

Throughout its nearly three centuries of history, skating has remained a source of exercise and entertainment. While the design and materials are sure to evolve, its appeal will remain much as it did 150 years ago.

—Annalisa Palumbo



JIROFT

UNCOVERING IRAN'S LOST CIVILIZATION

In 2001 on a remote plain in southeastern Iran, a flash flood exposed the remains of an undiscovered civilization buried for more than 4,000 years. Scholars are still working to identify this mysterious culture that flourished in the Bronze Age alongside those of ancient Mesopotamia and the Indus Valley.

ANTONIO RATTI



FANTASTIC BEASTS

Scorpions flank a human figure with hooved feet who has caught two cheetahs by their tails, on a chlorite artifact recovered from Jiroft.

PEJMAN AKBARZADEH/PERSIAN DUTCH NETWORK



WEIGHTY QUESTIONS

Padlock-shaped objects, such as the one below, abounded at Jiroft. Sometimes called “weights,” their function is uncertain. Azerbaijan Museum, Tabriz, Iran

IVAN VDOVIN/ALAMY



In 2001 a flood of archaeological objects began appearing in the antiquities market seemingly out of nowhere. For sale were distinctive pieces of jewelry, weapons, finely crafted ceramics, drinking vessels, and game boards—featuring unusual artistry and magnificent inlays of carnelian and lapis lazuli. These extraordinary pieces featured a complex symbology of animals, both wild and domesticated, depicted fighting among themselves or with human figures, the humans

always triumphant. There were beautifully realized bucolic scenes of animals grazing in vast palm groves and architectural reproductions of temples or palaces.

Data provided by the internet sites and auction houses selling these mysterious pieces was sparse and, at best, vague. Their origins were often listed as “from Central Asia.” At first, it was assumed that the pieces were the work of expert forgers, but as more came on the market in the following months, scholars began to speculate that they could be genuine, deriving from an undocumented site whose location was

DIGGING UP A BURIED CIVILIZATION

2000

Heavy rains in the Halil River Valley reveals an undiscovered ancient necropolis. The antiquities market is flooded by artifacts looted from the site.

DESERT SANDS

Some scholars once believed that the lands (like these close to the city of Kerman) made southeastern Iran an unlikely spot for an ancient civilization to develop, but the discovery of the Jiroft culture surprised them.

JOSÉ FUSTE RAGA/AGE FOTOSTOCK

2003

Iranian archaeologist Yousef Madjidzadeh directs the initial archaeological excavation of the Jiroft site in collaboration with foreign universities.

2008

Completing several seasons of digging, Madjidzadeh publishes the first academic paper documenting and analyzing the finds at Jiroft.

2014

After a seven-year hiatus, official excavations resume at Jiroft as scholars closely examine major structures and document stone artifacts.



SKY BULLS

Chlorite, a hard but easily carvable stone, was used extensively in the Jiroft culture and the wider region. The bulls on this chlorite vase, above, produced in the mid-third millennium B.C., were associated with the sky. National Museum of Iran, Tehran

SIMON NORFOLK/NATIONAL GEOGRAPHIC

unknown to them. In 2002 more appeared on the market.

Iranian police solved the mystery later that year. A coordinated investigation led to the arrest of several traffickers and the confiscation of a hoard of artifacts. These objects were being prepared to be shipped from Tehran, Bandar 'Abbas, and Kerman to buyers around the world. Investigators revealed that most of these distinctive pieces could be traced back to a location in the Halil River Valley, about 25 miles south of Jiroft, a remote and peaceful city in southeastern Iran, not far from the Persian Gulf.

But where did these mystery artifacts come from? At the time, scholars knew of no dig sites in the area, but when they looked closer, they found a simple yet surprising explanation. In early 2001 flooding caused the Halil River to overflow its banks and erode the surrounding lands. Layers of sediment were washed away, and the remains of an ancient cemetery were exposed. Locals and looters quickly recognized the importance of the find and moved to collect and sell the artifacts they were finding.

The full import of the discovery became clearer after archaeologists made formal surveys of the area and found that this undocumented culture dated back nearly 5,000 years to the Bronze Age. Looters had ransacked thousands of graves in the necropolis, taking artifacts and damaging the site, but archaeologists were determined to study what remained. They traveled from universities around the world to join an Iranian team to protect as much of the exposed site as possible and excavate nearby areas to learn more about this ancient culture and its people.

A New Urban Culture

Lasting for several seasons, excavations near Jiroft began in February 2003, under the direction of Iranian archaeologist Yousef Madjidzadeh. Madjidzadeh's team identified a main necropolis, which they named Mahtoutabad. Most of the initial findings and artifacts are believed to have come from this site despite the looting of grave goods prior to the excavations. Almost a

mile to the west of the necropolis, archaeologists targeted for further study two large artificial mounds that rose above the plain. About a mile apart from each other, the two mounds were named Konar Sandal South and Konar Sandal North. They turned out to contain the remains of two major architectural complexes. The northern mound included a cult building, while in the southern one were the remains of a fortified citadel. At the foot of the mounds, buried under many feet of sediment, were the remains of smaller buildings. It's believed that the two mounds had once formed part of a unified urban settlement that stretched many miles across the plateau.

Madjidzadeh's preliminary conclusions from the partial data available made a big impression



UNCOVERING KONAR SANDAL

The two artificial mounds known as Konar Sandal North and South concealed the remains of what appear to be a cult building and a fortified citadel. Archaeologists began formal work at the site in the early 2000s.

MOHAMAD ESLAMI RAD/GETTY IMAGES



on the scientific community. Some scholars, most notably American archaeologist Oscar White Muscarella, strongly questioned his findings, sparking furious academic debates. Critics were concerned that the initial looting of the site's artifacts made it difficult to accurately assess their age and authenticity.

Despite the controversies, work continued at the Iranian site over the course of several seasons with visiting scholars from all over the world, including American archaeologist Holly Pittman from the University of Pennsylvania. The first phase of excavations at the site lasted through 2007.

The initial picture of the Jiroft civilization that existed became clearer. Madjidzadeh published the team's findings, which suggested that an

LITTLE MESOPOTAMIA

JIROFT IS LOCATED high in an alluvial valley that extends down as far as the Jazmurian depression, very close to the Persian Gulf. The valley is home to a delicate ecosystem, in continuous struggle with the aridity of the surrounding region. Frequent winter rains normally provide the water necessary to support agriculture; the rains seep into the subsoil and feed an underground aquifer. In addition, sediments from seasonal flooding make the soil highly fertile and suitable for growing fruit and vegetables. This combination of conditions makes the valley one of the most fertile regions in Iran. Today many call it "Little Mesopotamia," and so it should be no surprise that this special spot was where an ancient civilization took root and flowered.



HELD BY THEIR TAILS

A stone weight from Jiroft (mid-third millennium B.C.) offers a variation on a common Bronze Age theme of a mythical hero taming fierce animals. National Museum of Iran, Tehran

FRANS LANTING/NATIONAL GEOGRAPHIC

urban center had been established at the Jiroft site as long ago as the end of the fifth millennium B.C. His optimistic conclusion stated that “the region of Jiroft . . . was a major occupation of urban character in the region during the third millennium B.C. Its center was in the

valley of the Halil River where large sites with monumental architecture, sizable craft production areas, domestic quarters, and extensive extramural cemeteries dominated the landscape.” Archaeologists found distinctive objects—some practical, some decorative, and others sacred—that often featured carved semiprecious stones such as calcite, chlorite, obsidian, and lapis lazuli. The citizens of this city seem to have maintained close contact with cities in Mesopotamia, the region located between the Tigris and Euphrates Rivers (roughly coinciding with present-day Iraq). Painstaking excavation of Konar Sandal South revealed that the citadel there had once been surrounded by a monumental wall of brick and had several rooms that through radiocarbon analysis have been dated to between 2500 and 2200 B.C.

Digging at the Jiroft site halted for seven years and began again in 2014 as Iranian archaeologists returned to the site. Scholars from Italy, France, Germany, and other nations have taken part in these new digs, which have been uncovering even more detailed information about the Bronze Age people of Jiroft.

Arts and Letters

Archaeologists were thrilled to discover the complexity and beauty of the artworks found at the Jiroft site. The decorative iconography present on hundreds of the vessels is rich with skillfully executed symbolism and shows remarkable similarities with the iconography associated with the Mesopotamian tradition. The scorpion images found at Jiroft echo the scorpion-men depicted in the royal necropolis at Ur (mid-third millennium B.C.). The bull-men of Jiroft call to mind the bull-man Enkidu from



the Akkadian *Epic of Gilgamesh*. The parallels are so pronounced that it is theorized that the two cultures could share a common cultural heritage.

Most striking of all are the recurrent, distinctive images of an inverted bull with an eagle hovering above it and of battles between eagles and snakes. These two motifs appear on many of the vessels found at Jiroft and seem to evoke one of the most famous Mesopotamian myths: that of Etana, the mythical shepherd-king of Kish who is cited on the Sumerian king list, as the first sovereign after the universal flood. In the myth, one of the most complex and exciting tales from this early period, Etana needs a way to ascend into heaven to attain a magic plant that will allow his wife to give birth to an heir. Meanwhile, an eagle and a serpent struggle; the pair, while once

ARCHITECTURAL ELEMENTS

A vessel discovered at Jiroft depicts what appears to be a two-story building, perhaps with terraces and a decorative frieze at the top. Other vessels discovered there are also decorated with detailed representations of what appear to be the facades of buildings. Researchers have not been able to determine the exact function of these structures. They could have been places of worship, palaces, or other constructions, and they provide an intriguing glimpse into the civilization's architecture.

MADJIDZADEH Y/IRANIAN CULTURAL/GAMMA-RAPHO



sworn allies, will become mortal enemies after the eagle eats the snake's offspring. The snake wreaks revenge on the eagle, leaving him to die in a pit. On the advice of the sun god Shamash, Etana saves the eagle, and in gratitude the bird bears Etana up to heaven to retrieve the plant he needs to ensure his succession.

The motif of the universal flood, a central one for the Sumerians and Babylonians, may also appear in some representations from Jiroft. Italian archaeologist Massimo Vidale noted in his work on Jiroft that "on a vase, a kneeling character holds two zebu whose heads produce waves. A mountain rises from the waves; another character with the divine symbols of the Sun and the Moon lifts something that looks like a rainbow, beyond which we can see chains of mountains

THE POETIC CITY OF ARATTA

YOUSSEF MADJIDZADEH, an Iranian archaeologist, was the first to excavate at the Jiroft site in the 2000s. Over the course of his work, he came to believe that the two artificial mounds of Konar Sandal belonged to an ancient city called Aratta, a place, according to ancient Sumerian texts, that abounded in gold, silver, precious stones, and lapis lazuli. The Sumerian texts also say Aratta was almost inaccessible and protected by towering, rugged mountains. Aratta appears in four Sumerian poems featuring Enmerkar and Lugalbanda, kings of the Sumerian city of Uruk, but these monarchs are mythical, and their existence is not found in the historical record, so they do not provide a firm anchoring point for the chronology of Konar Sandal and the Jiroft civilization.



RECORDED WRITING

One of the baked clay tablets found in Jiroft (above) bears a geometric script that researchers are still working to decipher. Third millennium B.C.

AKG/ALBUM

that emerge . . . Although it is essential to be cautious, it is difficult for the writer to leave aside the impression that the image tells an ancient myth about a great flood.”

In one of the entrances to the citadel of Konar Sandal South, scholars found a fragment from a baked clay tablet inscribed with writing. In another spot, some 500 feet to the north, three other tablets bearing written texts in two different writing systems were found. Whoever these people were, they had a writing system. One of them appears similar to the so-called linear Elamite, a script used in the cities of the kingdom of Elam, on the border with Mesopotamia. The other script was geometric in form and had not been seen before. The obvious inference from the two finds is that the civilization at Jiroft was literate.

Identification Ideas

In 2003, after examining the huge collection of confiscated archaeological finds, Madjidzadeh, the director of operations, put forward an intriguing hypothesis. Based on his observations of the site and a study of ancient Mesopotamian cuneiform texts, Madjidzadeh believes that the Jiroft civilization is Aratta, a land that was praised for its wealth in numerous Sumerian poems. An ancient text describes a conflict between Aratta and the Mesopotamian city of Uruk. In the telling, Aratta is a vibrant place: “battlements are of green lapis lazuli, its walls and its towering brickwork are bright red, their brick clay is made of tinstone dug out in the mountains.”

Madjidzadeh points to the site’s geographical

position surrounded by mountains, the abundance of semiprecious stones, and the high degree of civilization as factors in favor of an Aratta identification. Skeptics criticize Madjidzadeh’s theory as lacking in solid evidence. There is no documentary proof to suggest that Aratta existed anywhere outside of the Sumerian poems and that Aratta was just a Bronze Age myth.

Other scholars have theorized that the civilization near Jiroft may correspond to the ancient kingdom of Marhasi. This theory has some textual support. First, there are the inscriptions of the kings of Akkad, a Mesopotamian empire, that describe their glorious Akkadian feats during the fight against a powerful state in the Iranian highlands. In one of these texts, the epilogue of the conflict is narrated in great detail: “Rimush [King of Akkad] defeated Abalgamash King of Marhasi in battle . . . When he conquered Elam and Marhasi he took 30 gold mines, 3,600 silver mines and 300 male and female slaves.” There is firm evidence that the city of Akkad existed between 2350 and 2200 B.C. Since Marhasi was Akkad’s contemporary, Marhasi can also be dated to that time, which lines up with the data from the Jiroft dig sites. Unlike Marhasi, Aratta cannot be identified with a specific period.

No one had ever dreamed that from the sands of such a remote and arid region, considered by many to be an unlikely spot for the development of a complex civilization, that a refined culture could emerge. Since excavations began nearly two decades ago, numerous discoveries—once thoroughly analyzed—will make it possible to place Jiroft in its proper historical perspective. Since 1869, when the remnants of Sumerian culture were uncovered, Mesopotamia has been considered the cradle of civilization. But the remarkable findings at Jiroft demand a reassessment of that interpretation. ■

HISTORIAN **ANTONIO RATTI**
SPECIALIZES IN THE IRANIAN BRONZE AGE.

Learn more

Mountains and Lowlands: Ancient Iran and Mesopotamia
Paul Collins, Ashmolean Museum, 2016.



RECOVERED OBJECTS

IT IS IMPOSSIBLE to know exactly how many objects were stolen from the various necropolises in the Halil River Valley in the early 2000s. Some scholars believe hundreds of pieces have been lost, while others estimate it could be as high as thousands or even tens of thousands. Whatever the true figure, it's likely that the stolen objects that have been recovered by the authorities make up only a tiny fraction of what was once there. The excavated pieces would have been sold on site before being sent by traffickers to other purchasers, which could be museums,

auction houses, and antique dealers. Selling antiquities online made it easier to disperse objects looted from Jiroft worldwide while also facilitating the production of forgeries and fakes, which were generally quite crude. Careful analysis of recovered objects was vital to sort out the counterfeit objects from the authentic ones. Looted material recovered by the authorities, and to a lesser extent that which was discovered in the official excavations, can be visited at the Jiroft Archaeological Museum and in the museums of Kerman and Tehran.



CAREFUL OBSERVATION

Above, Zahra Sarokhani, a scholar at Tehran University, records the objects brought from Jiroft for study.

MOHAMAD ESLAMI RAD/GETTY IMAGES

ANIMAL PARADE

A woolly animal, most likely a wild sheep known as a mouflon, appears in three horizontal bands decorating this vessel.

ANTONIO RATTI

SIGNS AND SYMBOLS

There is a rich iconographic repertoire among the archaeological findings from the site near Jiroft. There are representations of human figures and architectural elements, but animal motifs are, without doubt, the most common representations.



LORD OF NATURE

This vase (left) depicts a hero figure taming wild animals, a motif frequently found at the site of Jiroft. In the opened-out illustration (right), a kneeling figure can be seen subduing a pair of zebus. The wavy lines represent water. Scholars have noted similarities with the flood motif that would later inspire the great Mesopotamian *Epic of Gilgamesh*.



BUCOLIC SCENES

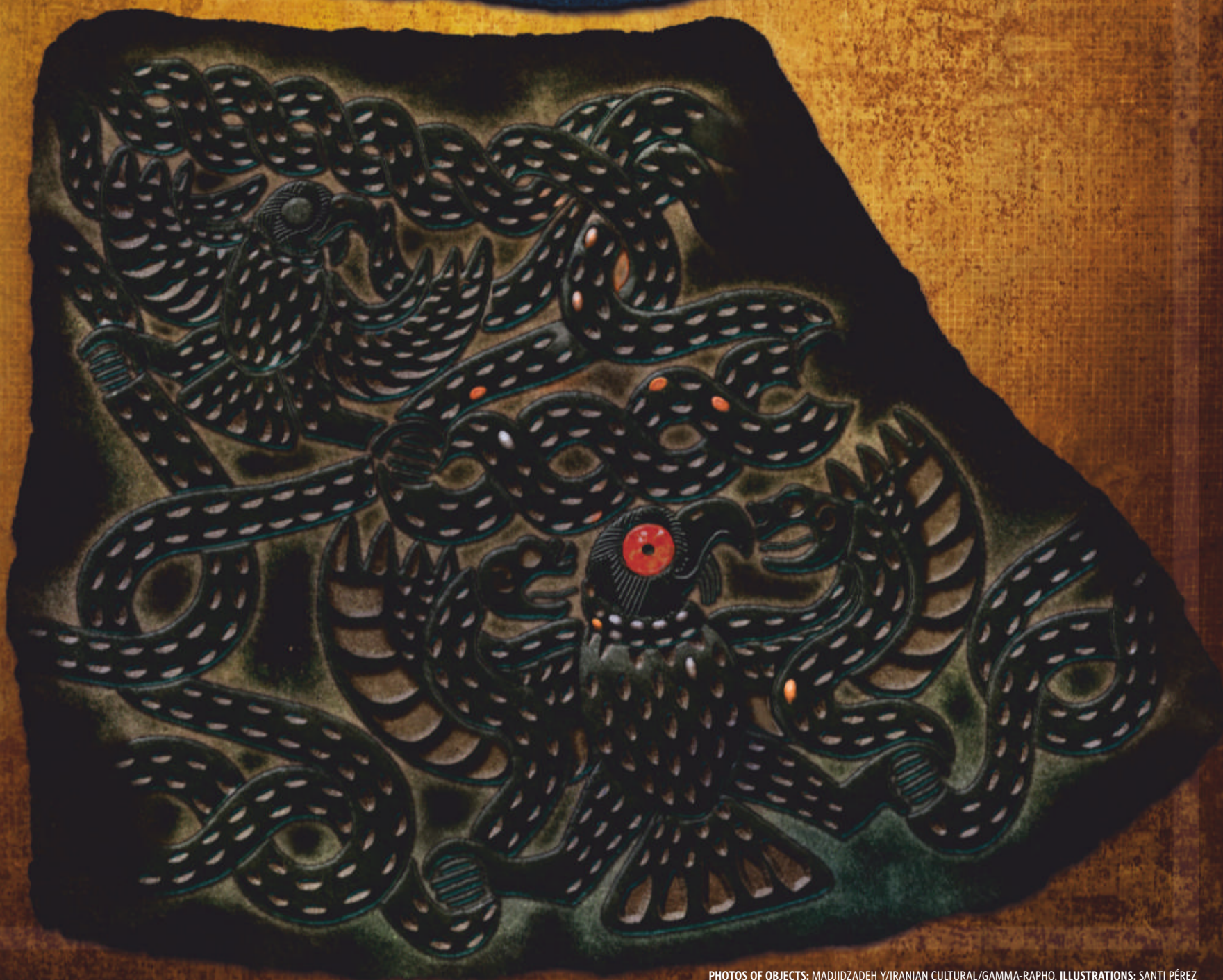
Goats and long-horned mouflons (wild sheep) are depicted grazing on this chlorite goblet (left). The opened-out illustration (below) can be read as a kind of landscape, reflecting the typical environment found in the mountain valleys that surrounded the settlement at Jiroft.



EAGLES AND SERPENTS

A red gemstone forms an eagle's eye on this Jiroft vase (left). In the opened-out illustration (right), the eagle's struggle with serpents can be seen in full. Eagles play a central role in the Mesopotamian *Etana Epic*, another link between the Jiroft Valley and Mesopotamian culture.





GOD OF WAR

Surrounded by war trophies, Ares sits in repose in a statue, which dates to the second century B.C. The war god was a popular subject with Romans, who modeled their creations after an ancient Greek version. National Roman Museum, Palazzo Altemps, Rome

BRIDGEMAN/ACI



ARMS AND ARMOR IN *THE ILIAD*

ACHILLES AGAINST HECTOR

The battle between the Greek hero Achilles and the Trojan prince Hector is the climax of the Bronze Age war epic, but what they carried and what they wore were just as central to the drama as the fighting itself.

CAROLINE ALEXANDER



DIVINE CRAFTSMAN

Achilles' second set of armor was made for him by the god Hephaestus (left), who presents the shield, helmet, greaves, and breastplate to the warrior's mother, the goddess Thetis (right). Fresco from Pompeii, circa first century A.D. National Archaeological Museum, Naples

ERICH LESSING/ALBUM



*So speaking [Hector] drew his sharp sword
that hung by his side, huge and strong made,
and collecting himself he swooped like a high-flying eagle,
an eagle that plunges through lowering clouds towards the plain
to snatch a soft lamb or a cowering hare;
so Hector swooped brandishing his sharp sword.
But Achilles charged, his spirit filled with
savage passion. Before his breast he held his covering shield,
beautiful and intricately wrought, and nodded with his shining
four-ridged helmet; splendid horsehair flowed about it
of gold, which the god Hephaestus had set thickly around the helmet crest.*



As an epic poem about the Trojan War, that momentous clash of two great armies around the city of Troy, Homer's *Iliad* describes many acts of combat. Of these, the climactic battle to which all the epic action has been driving is the ferocious duel between the Greek Achilles and the Trojan Hector.

Despite their very different personalities, the two men share general traits. Both are noble; Achilles is the son of a goddess and the king of Thessaly. Hector is the son of the king and queen of Troy. Both are the outstanding warriors of their respective armies. Both men are young and honorable in their different ways, and both men, as the epic takes pains to show, want desperately to live.

For both, their final confrontation is highly personal. Achilles' devastation of the Trojan army and its allies claimed the lives of Hector's own brothers and brothers-in-law. Hector in his turn has slain Achilles' closest comrade, Patroclus. And, improbably, the two heroes also briefly share a spectacular set of armor. How Hector came to wear it and the consequences of his doing so, accounts for one of the most dramatic themes in the entire epic.

The cause of the Trojan War, famously, was the elopement of beautiful Helen, queen of the Greek city of Sparta, with Paris, Hector's brother and a handsome prince from the Asiatic kingdom of Troy. While Helen and Paris are the catalysts for the action in *The Iliad*, their decision

to marry is 10 long years behind them when the epic opens. The poem focuses on the tragic consequences of their rash act of passion, the war itself. Thus, *The Iliad*'s subjects are the relentless engagement of armies, of individual warriors locked in perpetual battle, of constant preparation for and recovery from combat, and the cost in human terms of this combat—the killing and the dying, and the rage and grief the deaths incur.

Arms and Armor

By best estimate, *The Iliad* was composed around 750–700 B.C., but this final composition followed at least five centuries of oral storytelling by generations of poets before Homer. The epic tradition that culminated in the poem, then, had roots deep in the Bronze Age, so-called because societies at this time either made or traded objects made of the copper-tin alloy that constitutes bronze. This was a major technological advance that revolutionized the production of farming and work tools, household objects, jewelry, cult objects—and weapons of war.

Bronze is harder than copper, harder indeed than iron, and bronze-pointed spears set on wooden shafts, bronze-tipped arrows, and bronze slashing and thrusting swords were objects of enormous utility, prestige, and value. Similarly, bronze armor—helmets for the head, shields and breastplates for the body, greaves for the shins—were a warrior's best chance of protection against the bronze-hard weapons he would encounter on the battlefield.

WARRIOR'S NAMES

Trojan prince Hector has several epithets in *The Iliad*, including one to describe his "shining helmet." Mycenaean helmet from the 16th century B.C. (above). National Archaeological Museum, Athens

DEA/ALBUM



GILDED WEAPONS

Intricate goldwork on two 16th-century B.C. Mycenaean daggers shows a lion hunt (above left) and marine motifs (above right). National Archaeological Museum of Athens

DEA/SCALA, FLORENCE

Given its subject, it is unsurprising that there are more detailed descriptions of armaments and weapons in *The Iliad* than of any other class of object. Of all the weapons described, nothing compares to the armor of Achilles, who possesses two sets of armor in the epic. Each one is peerless and corresponds with two distinct stages of his engagement with the war. First, as the Greeks' most fearsomely effective combatant; second, when he withdraws from the fighting in a rage at his commander in chief Agamemnon, who confiscated his war prize, a woman named Briseïs, whom Achilles claims to love.

Born of the goddess Thetis and the mortal king Peleus, Achilles is a demigod, a cut above all the other heroes in whom no divine blood, or *ichor*, flows; and yet, like them, he is mortal. Nonetheless, his close relationship with the Olympian gods brings him advantages. His mother has direct access to Zeus, the king of the gods, and can ask favors of him for her son, bypassing the usual route of offering up prayers.

On the battlefield, Achilles is equipped like no other. His divine warhorses, a wedding gift from the god Poseidon to his father, were sired by the west wind. His trademark ash-wood spear, which no other hero is strong enough to wield, was a wedding gift to his father from the centaur Chiron. He possesses "stupendous armor, a wonder to behold, / a thing of beauty; the armor the gods gave to Peleus" (Il. 18.83-84), yet another wedding gift.

Most remarkable, it seems Achilles has a choice of fates, which is revealed when his comrades come to his quarters to beg him to return to battle. Achilles refuses, and in a momentous speech he declares that he knows he will lose his life if he returns:

For my mother tells me, the goddess Thetis of the silver feet, that two fates carry me to death's end; if I remain here to fight around the city of the Trojans, my return home is lost, but my glory will be undying; but if I go home to the beloved land of my father, outstanding glory will be lost to me, but my life will be long. (Il. 9.410-45)

Thetis has direct access to Zeus and can ask favors of him for her son Achilles.

JUPITER AND THETIS BY JEAN-AUGUSTE-DOMINIQUE INGRES, 1811. MUSÉE GRANET, AIX-EN-PROVENCE
JOSEPH MARTIN/ALBUM



CITIES UPON CITIES

The ruins of Troy are located at Hisarlik in northwest Turkey. Several cities occupied this site through the ages, including the Greco-Roman era, when these structures were built.

IMAGES & STORIES/ALAMY/ACI





Thus the armor that Peleus gave Achilles lies idle, and—because of his absence—the tide of battle turns against the Greeks, whom Homer calls Achaeans. At length, Patroclus makes a desperate, fatal request of Achilles—to borrow the distinctive armor “with the hope that likening myself to you the Trojans will hold off / from fighting, and the warrior sons of the Achaeans draw breath / in their extremity” (Il. 16.40-43). Reluctantly Achilles accedes to his dear friend’s plea. Wearing the trademark armor of Achilles, Patroclus sets forth to battle against Troy.

Patroclus’s heroism results in the desired respite for the Achaeans—but also in his own death, which is greatly enabled by the god Apollo, an unyielding champion of the Trojans:

FINDING THE LOST CITY OF TROY

FOR THOUSANDS OF YEARS, the ruins of Troy were lost to history. Many speculated as to its location in northwest Turkey, but it wasn’t until the 19th century that the site was identified. In the 1870s German archaeologist Heinrich Schliemann excavated a tell (an artificial mound covering ancient sites) at Hisarlik. As Schliemann dug, he realized that many cities—not just one—had occupied that place over the millennia, with each new city being built on top of the ruins of the old. Nine major periods of occupation have been discerned, and at first, Schliemann thought the second one, Troy II, was the one from Homer’s epic poem. Today scholars believe that Troy VI, which dates to around 1700-1250 B.C., is most likely candidate to be the city in which Achilles and Hector clash in *The Iliad*.

*[C]loaked in thick mist Apollo met him,
then stood behind and struck the back and
broad shoulders of Patroclus
with the flat of his hand; so that his eyes spun.
From his head Phoebus Apollo struck the helmet;
and rolling beneath the horses' hooves it rang
resounding,
four-horned, hollow-eyed, the horsehair
crest defiled
with blood and dust. Before this it was
forbidden that
the horsehair-crested helmet be defiled by
dust,
for it had protected the handsome head and
brow of the god-like man
Achilles; but now Zeus gave it to Hector
to wear on his head; but his own death was
very near.
In Patroclus' hands the long-shadowed spear was wholly
shattered,
heavy, massive, powerful, pointed with bronze;
from his shoulders
his bordered shield and belt dropped to the
ground;
then lord Apollo, son of Zeus, undid his breastplate.
Confusion seized his wits, his shining limbs
were loosed beneath him,
Patroclus stood stunned. Behind him, in his
back, between his shoulders,
a Trojan man struck with a sharp spear
at close range (Il. 16.790-807)*

DIVINE OPPOSITION

The Olympian god Apollo (depicted below, in a relief from the Temple of Apollo Palatinus, Rome) opposed the Greeks during the Trojan War.

AKG/ALBUM



Struck first by a god and then by a Trojan man, rendered utterly vulnerable, Patroclus attempts to retreat but is caught and slain by Hector, who vaunts over the dead man—and strips him of his armor. A bitter fight ensues between Achaeans and Trojans for this great prize, and at length the Trojans prevail. Hector is quick to exchange Achilles' armor for his own—an act of

hubris that causes Zeus, who is watching from the heights of Olympus, to shake his head in disapproval.

A New Set of Armor

Back at the Achaean camp, Achilles learns of Patroclus's death. Instantly his anger with Agamemnon evaporates, and he is filled with sorrow for his fallen friend and rage at Hector. Bent on revenge, he declares he will return to the fighting and asks his goddess mother to obtain

*“[C]loaked in thick mist Apollo met him,
then stood behind and struck the back and
broad shoulders of Patroclus”*



LION-HEARTED

A warrior on a sixth-century B.C. drinking cup decorated with scenes of the death of Patroclus. Berlin State Museums

ADAM EASTLAND/ALAMY



BROTHERS-IN-ARMS

Sixth-century B.C. drinking cup depicting Achilles binding Patroclus's wounds. Berlin State Museums

SCALA, FLORENCE

new armor. With this request, Achilles takes a decisive step on the path that leads inexorably to the fate he once sought to avoid—an early death.

Action on the field of war stops, and the epic follows his mother Thetis to the divine workshop of Hephaestus, master smith for the gods. In the bustling magical workshop, with its great bellows and ingenious mechanical attendants, Hephaestus forges Achilles' brilliant new armor.

With its creation, Achilles crosses a landmark line in his own life. The armor that his mother has entreated for his protection is in fact a token of his approaching death. All this is known to Hephaestus. He will create the most splendid armor any mortal man has ever worn, but, as he tells Achilles' mother, it will not save her son's life:

ACHILLES AND PATROCLUS

PATROCLUS WAS THE dearest companion of Achilles, whose "ruinous wrath . . . inflicted woes without number upon the Achaeans." The pair are often together in *The Iliad*, seeking each other's company and counsel. Patroclus perishes on the battlefield while wearing Achilles' armor, in an attempt to rally the spirits of the Greeks and terrify the Trojans. After learning of his friend's death at the hands of Hector, Achilles' anger abandons him. He is enveloped by overpowering grief: "Taking with both hands the fire-blackened ashes / he poured them down upon his head and defiled his handsome face . . . and he lay outstretched in the dust / a great man in his greatness, and with his own hands he defiled his hair, tearing at it." This grief will power the next episode of the *Iliad* when Achilles seeks revenge on Hector.

FALLEN FOE

Under the winged shadow of Patroclus, Achilles drags the lifeless body of the Trojan Hector with his chariot (below). Fifth-century B.C. lekythos. Louvre Museum, Paris

RMN-GRAND PALAIS



*Would that I were so surely able to hide him
away from death and its
hard sorrow,
when dread fate comes upon him,
as he will have his splendid armor, such as
many a man
of the many men to come shall hold in wonder,
whoever sees it. (Il. 18.464-467)*

Pouring all his skill into the work, Hephaestus creates a magnificent helmet, breastplate, and greaves, but his masterpiece is the shield:

*[A]nd on it
he wrought with knowing genius many
intricate designs.
On it he formed the earth, and the heaven,
and the sea,
and the weariless sun and waxing moon,
and on it were all the wonders with which the
heaven is ringed (Il. 18.482-485)*

On it too are depictions of cities and the life within them, weddings, counsels, shepherds with their flocks, farms, and vineyards. In short, the shield that Achilles will carry into war bears upon it all the variety of life he will shortly lose.

Stepping again onto the Trojan plain, Achilles cuts a blazing swath through the fighting, until fate brings him face to face with Hector, who is wearing the armor he stripped from Patroclus. As Hector watches Achilles approach, his courage breaks and he briefly contemplates putting aside his armor altogether and, naked as he would be, offering terms to Achilles, but this fantasy passes and goaded by Athena in disguise as his own brother, Hector stands to fight:

*As a star moves among other stars in the
murky milk of night,
Hesperus the Evening Star, the most beautiful
star to stand in heaven,
so the light shone from the well-pointed
spearhead that Achilles
was shaking in his right hand, bent upon evil
for Hector,
surveying his handsome flesh, where it might
best give way. (Il. 22.306-321)*



Scholars believe that in pre-Homeric tradition, Achilles' trademark ash-wood spear had magic powers, such as never missing its mark, or returning to its owner after being thrown—yet in *The Iliad* it is merely a formidable weapon. Likewise, Achilles' divine horses can run with the wind, but in *The Iliad* they cannot carry him from death. Similarly, there are clues that in pre-Homeric tradition the armor of Achilles was also once “magic,” making the hero who wore it invincible. This theory makes sense of the bizarre circumstances of Patroclus's death. No other hero is struck by a god as Apollo strikes Patroclus, and his purpose in doing so seems to be not just to stun Patroclus, but to divest him of Achilles' magic armor.



Now as Achilles and Hector face each other, all of Hector's body is clad in this same armor, except "at the point where the collarbone holds the neck from the shoulders there showed / his gullet" (Il. 22.224-5). At precisely this point Achilles strikes, mortally wounding Hector. Is Achilles' predatory eying of Hector's flesh simply a function of his strategic skills as a warrior—or another remnant of an older version in which Hector wore his magic armor, and Achilles had to seek the only niche of vulnerability?

The final poet of *The Iliad*, inheriting an epic tradition that was at least half a millennium old, undoubtedly had at his disposal crowd-pleasing features such as magic horses, magic potions, caps of invisibility, and magic armor to protect

his story's favorite heroes. But Homer, it seems, aspired to something more profound. In his telling, even a demigod like Achilles is made of flesh that can be wounded and blood that can flow. *The Iliad* inherited from Homer has been honed to deny the audience any evasion of its message: War is a fearful business and not even heroes will escape unscathed. ■

A VETERAN CONTRIBUTOR TO *NATIONAL GEOGRAPHIC*, CAROLINE ALEXANDER HAS WRITTEN EXTENSIVELY ON HOMER, INCLUDING A TRANSLATION OF *THE ILIAD*.

Learn more

BOOKS
The War That Killed Achilles: The True Story of the Iliad
 Caroline Alexander. Faber & Faber, 2011.

MOMENT OF TRIUMPH

Guided by Athena, Achilles strikes the fatal blow against Hector and plunges his spear into the Trojan's throat. Painting by Peter Paul Rubens, circa 1630, Museum of Fine Art, Pau, France

BRIDGEMAN / ACI

THE GOLDEN SHIELD

Book XVIII of *The Iliad* tells how the god Hephaestus made a magnificent shield for Achilles at the request of his mother, Thetis. It was decorated with numerous scenes that the poem describes in great detail. This passage of the poem served as a basis for later artistic attempts to re-create the shield. In the early 19th century, in homage to the great poem, English sculptor and draftsman John Flaxman designed a gilded silver disk adorned with the dramatic scenes described.

BRIDGEMAN/ACI

1 THE FIRMAMENT

"On [the shield] he formed the earth, and the heaven, and the sea and the weariless sun and waxing moon, / and on it were all the wonders with which heaven is ringed"

2 CITY OF JOY

"he made two cities of mortal men, / both beautiful; and in one there were weddings and feasts, / and they were leading the brides from their chambers beneath the gleam of torches"

3 CITY UNDER SIEGE

"But around the other city lay two armies of men, / shining in their armor . . . the city was not yielding . . . but the other men set forth; and Ares led them and Pallas Athena"

4 WORK IN THE FIELD

"And on the shield he made a soft fallow field—fertile worked land / broad and thrice plowed; and on it many plowmen / were driving their yoked teams of oxen"

5 THE HARVEST

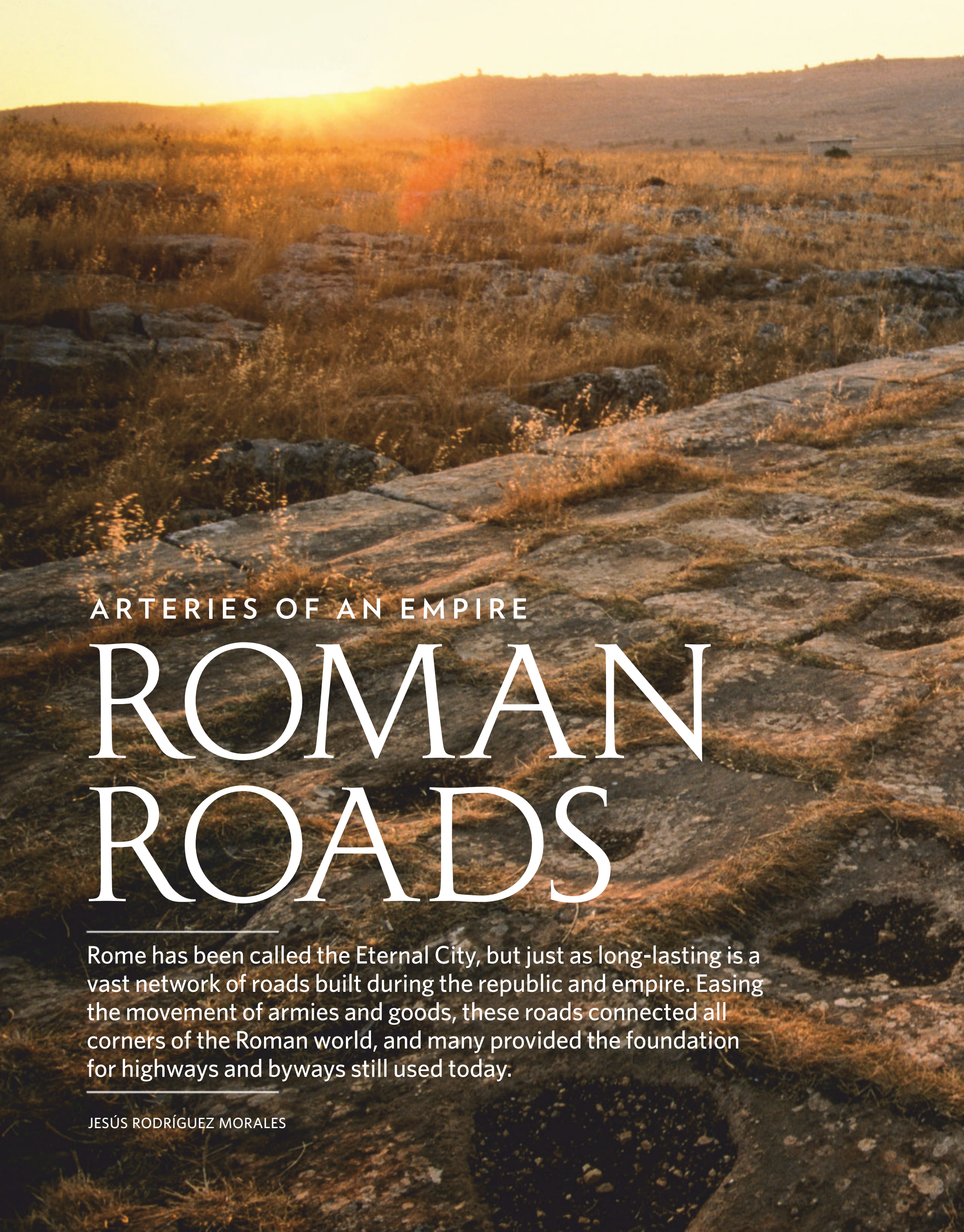
"And on the shield he placed a royal estate; and there the laborers / were reaping, sharp sickles in their hands. / Some sheaths were thickly falling to the ground along the row"

6 CATTLE AND LIONS

"And on it he made a herd of straight-horned cattle . . . and nine sleek dogs followed at their feet; / but two dread lions held a bellowing bull . . . and he lowing loudly / was being dragged away"







ARTERIES OF AN EMPIRE

ROMAN ROADS

Rome has been called the Eternal City, but just as long-lasting is a vast network of roads built during the republic and empire. Easing the movement of armies and goods, these roads connected all corners of the Roman world, and many provided the foundation for highways and byways still used today.

JESÚS RODRÍGUEZ MORALES



REMAINS OF THE ROAD

A paved Roman road stretches across the landscape near present-day Aleppo, Syria. Rome built this highway to link Aleppo with the city of Antioch (modern Antakya in Turkey).

JAMES L. STANFIELD/NGS

A photograph of a long, straight cobblestone path that recedes into the distance. The path is flanked by tall, dark trees, creating a tunnel-like effect. The sun is shining brightly from the end of the path, creating a strong lens flare and illuminating the scene. The cobblestones are large and irregular, and the overall atmosphere is serene and historic.

QUEEN OF ROADS

Begun in 312 B.C., the Appian Way is perhaps the most famous Roman road of all. It first united Rome with Capua and then was extended south to the port city of Brundisium on the coast of the Adriatic.

RICCARDO AUCI

Ancient Rome was famous for many things, many of them big and flashy. Gladiators, triumphs, and emperors often spring to mind, but perhaps Rome's most enduring contribution to history is more humble: their roads (which all led back to Rome), a vast, interconnected network spanning as many as 200,000 miles at its maximum.

Across Europe, parts of North Africa, and the Middle East, the remnants of these roads can be found crisscrossing the landscape, from Scotland to Mesopotamia, from Romania to the Sahara. Rome's earliest roads were built to connect the city on the Tiber with other cities on the Italian Peninsula. As Rome's influence grew, their system of roads expanded too. They became arteries connecting new territories and their peoples to Roman civilization and eventually the Roman Empire. Some 30 roads from all points of Italy connected with Rome, many bearing the names of their builders, such as the Appian Way named for Appius Claudius, or the names of their destinations, such as the Ardeatina Way that led to Ardea, about 24 miles from Rome.

Roads were Rome's "DNA" from the very beginning. Begun in 451 B.C. and finished a year later, the Lex XII Tabularum, or Law of the Twelve Tables, was the earliest set of written policies. Inscribed on 12 bronze tables, they spelled out procedures for trials, property ownership, crime and punishment, and civil rights. They also included rules for the road, setting a standard width of eight Roman feet for straight

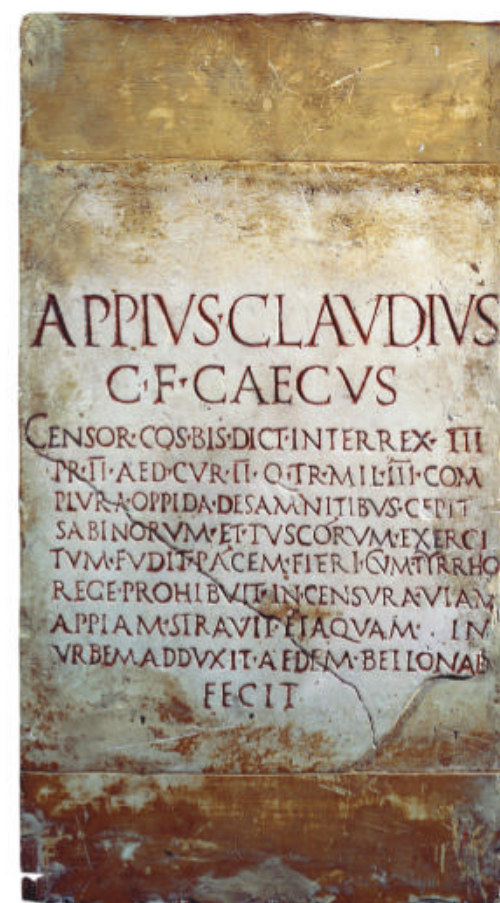
roads and 16 for curved ones (one Roman foot is slightly longer than a foot in the modern Imperial system).

The Appian Way

The Via Appia, or Appian Way, is perhaps the most famous Roman road. Paved with large basalt slabs, it was built in the fourth century B.C. at the direction of Censor Appius Claudius. At first, the road connected Rome to Capua, about 132 miles away in the Campania region of Italy. By 244 B.C. the road had been extended south more than 200 miles to reach the port city of Brundisium (modern Brindisi) on the Adriatic coast of southern Italy.

Because the road became the main conduit from Rome to the Adriatic ports and the Mediterranean, the Appian Way became a crucial component of Rome's economy as well as its military. It was wide enough for two carts to pass in opposite directions or for five soldiers to march side by side.

Building the Appian Way was a massive undertaking, but the excellent craftsmanship of the road was apparent for centuries. First-century A.D.



NAMESAKE

Elected censor in 312 B.C., Appius Claudius sponsored two signature Roman works: the Via Appia (Appian Way) and the Acqua Appia, Rome's first aqueduct. Shown above is a fourth-century B.C. inscription to him.

DEA/ALBUM

BUILDING ROME'S ROADS

450 B.C.

The Law of the Twelve Tables establishes the legal width of both Rome's straight and curved roads.

312 B.C.

Censor Appius Claudius sponsors the Via Appia, which will become Rome's most famous road.

220 B.C.

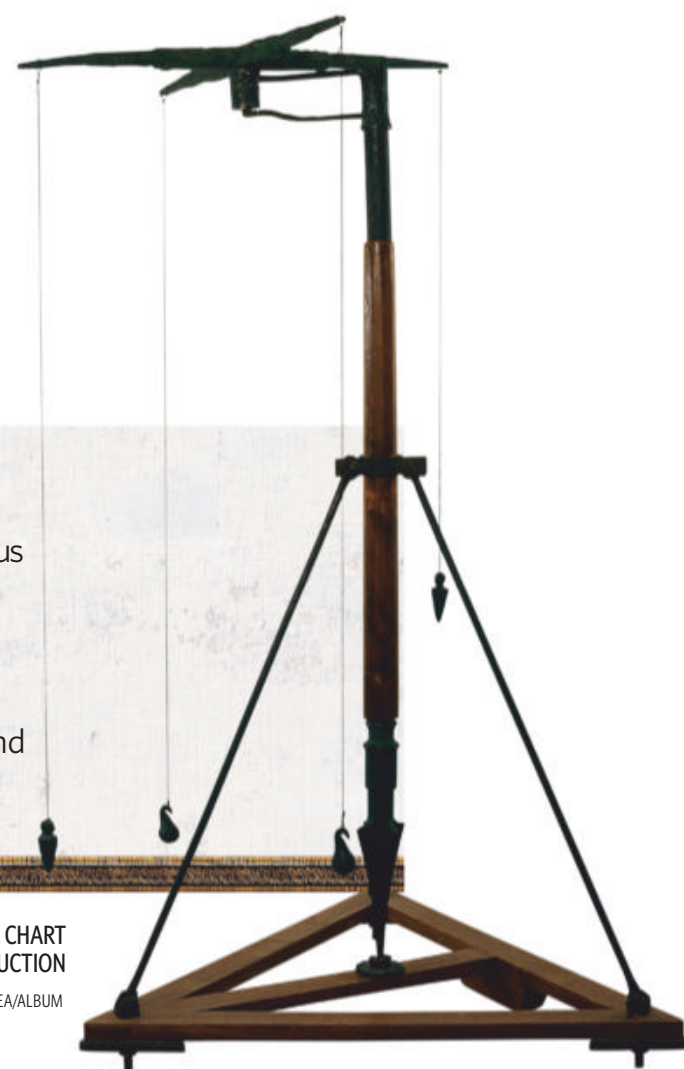
Construction begins on the Via Flaminia, which will connect Rome to the coastal city of Ariminum.

20 B.C.

Emperor Augustus reorganizes the system for officially supervising roadbuilding and maintenance.

GROMA, INSTRUMENT USED BY THE ROMANS TO CHART THE COURSE OF THEIR ROADS. MODERN RECONSTRUCTION

DEA/ALBUM





MAP: V. HURTADO/M. HERNÁNDEZ/EOSGIS

ROMAN MILESTONES

IN 20 B.C. Emperor Augustus became the *cura viarum*, the superintendent of all Roman roads, and established what second-century A.D. historian Dio Cassius called the “golden milestone.” Located in the Roman Forum, close to the Temple of Saturn, the *Milliarium Aureum* was a giant column, made of bronze or marble clad in bronze, that allegedly marked the spot where all the roads in Italy came together. Sources say it resembled the *milliaria*, the small “mile markers” found along Roman roads. Each one was placed one Roman mile, the distance of a thousand paces, apart from the next.



TRAVEL GUIDES

One of four silver cups (left) found in 1852 at the site of an ancient Roman spa in Vicarello, Italy, is engraved with directions and lodging for a trip to Rome from Spain

SCALA, FLORENCE

ALL THAT REMAINS

A column base (far left) discovered in the Roman Forum is believed by some scholars to have belonged to the *Milliarium Aureum*.

SHUTTERSTOCK

Roman poet Statius called it *longarum regina viarum* (queen of the long roads). Writing hundreds of years after its construction, the sixth-century A.D. Byzantine historian Procopius also lauded its engineering:

It . . . is one of the most remarkable achievements because the stone, by nature very hard, did not exist in this part of the country and had to be transported from afar. The stones were smoothed and leveled, then cut into angular shapes and fitted one next to the other without the need to join them with bronze or any other thing. So they are so well nested and assembled that they have the appearance of a single compact mass . . . Despite the long period of time that has elapsed, and the continuous passage of so many carriages and beasts of burden, no stone has been displaced from its original position, nor has any been worn or lost its polish.

Ancient scholars of the Roman Republic have left detailed accounts of how roads were built—from contracts to construction. Roman historian Livy described how second-century B.C. censors Quintus Fulvius Flaccus and Lucius Postumius Albinus “were the first to award contracts to pave roads in the city with stone, with gravel on the sides, and to build curbs as well as bridges in many places.”

First-century A.D. Greek biographer Plutarch’s biography of Gaius Gracchus, one of the Roman Republic’s most significant politicians, offers rich insights into roadbuilding. A plebeian tribune in the second century B.C., Gracchus made

road-building his main focus, joining utility and beauty in roads that traversed the land in a straight line, without turns or detours, and foundations made of cut stone, reinforced with layers of sand or compacted gravel. The depressions were filled and bridges were built over the rivers and streams, the two sides at the same height and always parallel, so that the entire work had a uniform and beautiful appearance. In addition, he measured the entire road and at the end of each mile, or roughly 5,000 feet, he put a stone column that served as a signal to the travelers.

During the republic, road construction was the responsibility of the censors (so-called because they maintained a census of Roman citizens). In the event of urgently needed road repairs, a curator could be appointed to supervise the work; in 67 B.C., for example, Julius Caesar was curator of the Appian Way. After his victory over Mark Antony in 31 B.C., Emperor Augustus took charge of repairing all the damage that a century of civil wars had caused roadways. After becoming superintendent of roads and in 20 B.C., Augustus appointed magistrates (the *curatores viarum*) to supervise the roads, with the responsibility of awarding contracts and overseeing construction and maintenance work. The budget to carry out these works came from taxes, tolls, and private or imperial patronage,



PEUTINGER TABLE (DETAIL) SHOWING ROME, 13TH-CENTURY COPY OF ROMAN ORIGINAL. ÖSTERREICHISCHE NATIONALBIBLIOTHEK, VIENNA
BRIDGEMAN/ACI

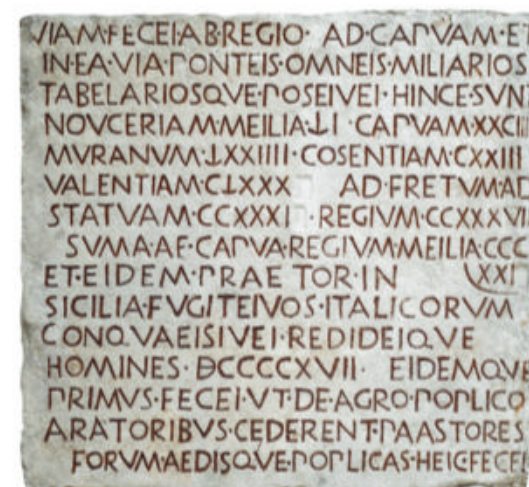
ROAD MAPS

HISTORIANS of Roman roads rely on “itineraries,” Roman documents that catalog the layout of the Roman roads, with the names of towns, lodgings, and distances between them. The main one is the Antonine Itinerary, perhaps from the time of Diocletian (r. A.D. 284–305), which includes a “road map” of Roman Britain. Another key source is the Peutinger Table, a medieval copy of a Roman road map in 12 sections, of which one is missing.

THE POLLA TABLET

An inscription from 132 B.C. (below) was found describing the Via Popilia. It lists the towns and distances between them along the road’s 321 miles in southern Italy.

SCALA, FLORENCE



ROAD WORK

Road construction was a major undertaking, as the first-century A.D. poet Statius makes clear in his description of the building of the Via Domitiana in Campania: “Oh, how many arms collaborate! Those who knock down the forests and clear the mountains

... Those who then join the stones and compose the road with the dust filling the air along with the humble stink. And those from beyond ... who drain the soggy lagoons to ensure proper runoff.”

MILESTONE (RIGHT) FOUND ON THE MOUNT OF THE TEMPLE OF JERUSALEM, BEARING THE NAMES OF EMPEROR VESPASIAN AND HIS SON TITUS

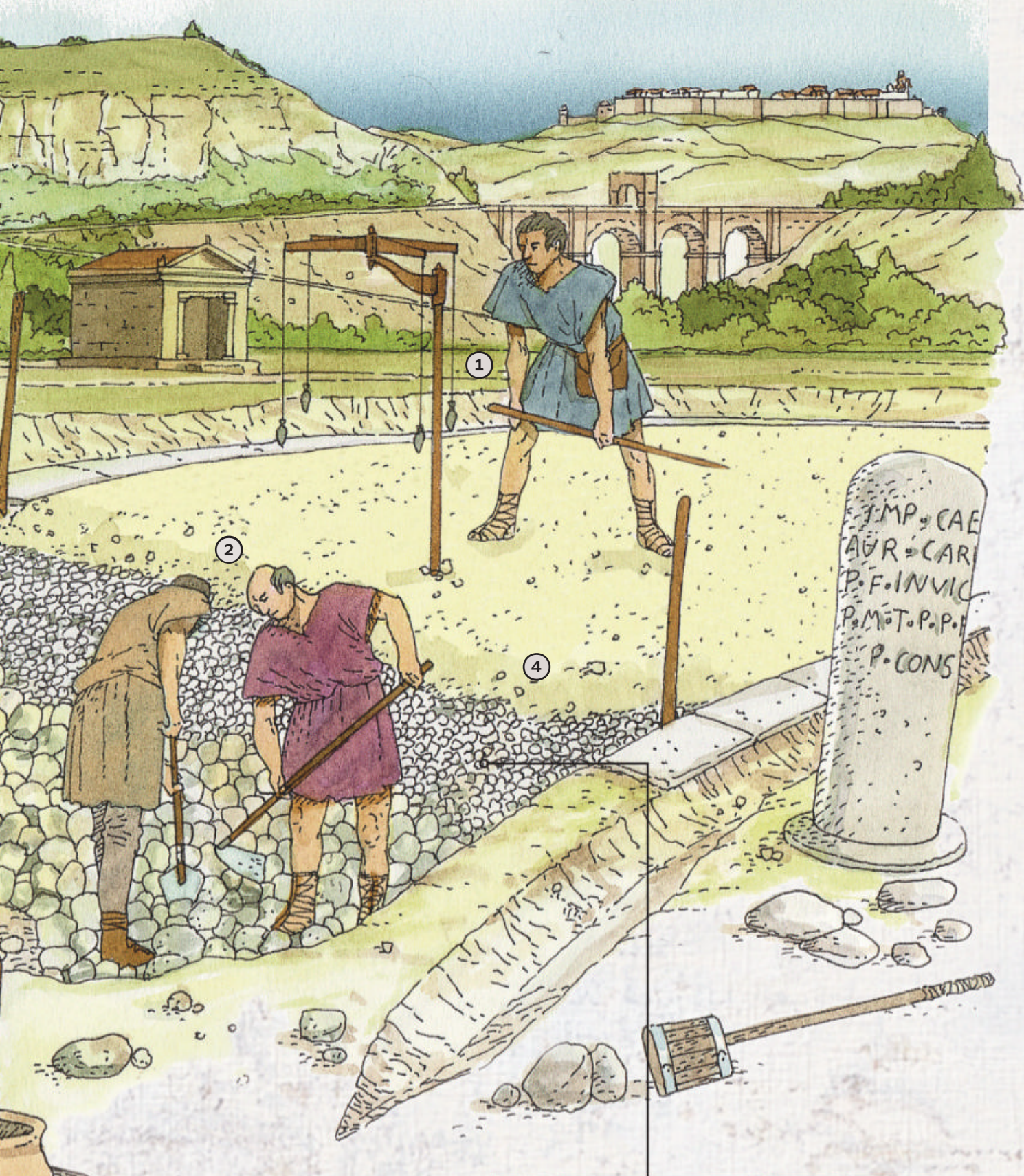
BRIDGEMAN/ACI



Very few Roman roads were built like the impressive Appian Way with its paved stone surface. Most roads were more like the one built by Roman consul Marcus Valerius Messalla Corvinus in the first century B.C., described by the poet Tibullus: “In some places it is packed down with hard gravel, in others with suitable stones fitted with skill. When the farmhand returns to the city at night, his feet unharmed, let him sing to you.”

PAVING A ROADWAY, RELIEF, FIRST CENTURY A.D. MUSEUM OF ROMAN CIVILIZATION, ROME

BRIDGEMAN/ACI



UNDER CONSTRUCTION

The different phases of building a road involved different kinds of labor. ① In the first stage, the terrain would be cleared. Engineers, using the *groma* (a Roman surveying tool), would determine the layout and mark the path of the road, keeping to a straight line wherever possible. ② Workers would dig down until firm ground was reached, and then ③ the pit would be filled with medium-size boulders that would form a solid foundation. ④ A layer of sand or gravel would be deposited on top to create a smoother surface for vehicles, pedestrians, and animals. Roads would only be covered with paving stones in exceptional cases, either because they passed through urban areas or because they traversed unstable terrain, which required an especially solid foundation and an upper layer with curbs.

FERNANDO AZNAR/BRIDGEMAN/ACI

A Roman road (right) between Osma and Garray in the Spanish province of Soria was excavated during construction on the modern Duero Highway. The road's surface layer was practically worn away from use, but the *gremium*, or large stone base, was perfectly preserved and covered at the top with boulders. The Roman road was elevated in the center and a downward slope on both sides drained water into gutters. The side curbs provided support to the whole structure.

CROSS SECTION OF ROMAN ROAD FROM OSMÁ TO GARRAY IN NORTHWESTERN SPAIN

JOSÉ LUIS FERNÁNDEZ MONTORO.
GRUPO DE ARQUEOLOGÍA EXPERIMENTAL ARECO S.L.



DOMITIAN WAY

In the square of the Hôtel de Ville in Narbonne, France, a portion of the Via Domitia is exposed to view. Begun in the second century B.C., this Roman road was the first to be built in Gaul (modern France).

SUNPIX TRAVEL/ALAMY/CORDON PRESS



as was the case with the Via Traiana, financed by the emperor Trajan, which replaced the Ap-pian Way as the main road between Benevento and Brindisi. The cities through which a road passed also had the obligation to contribute to its maintenance.

Building the Roads

When planning to build a road, engineers studied the local topography and gathered information from residents. They then plotted out the most logical course, prioritizing straightness and moderate slopes. When crossing flat land, the road was as straight as possible: the ancient Ap-pian Way, between Rome and Terracina, includes an uninterrupted straight line 56 miles long.

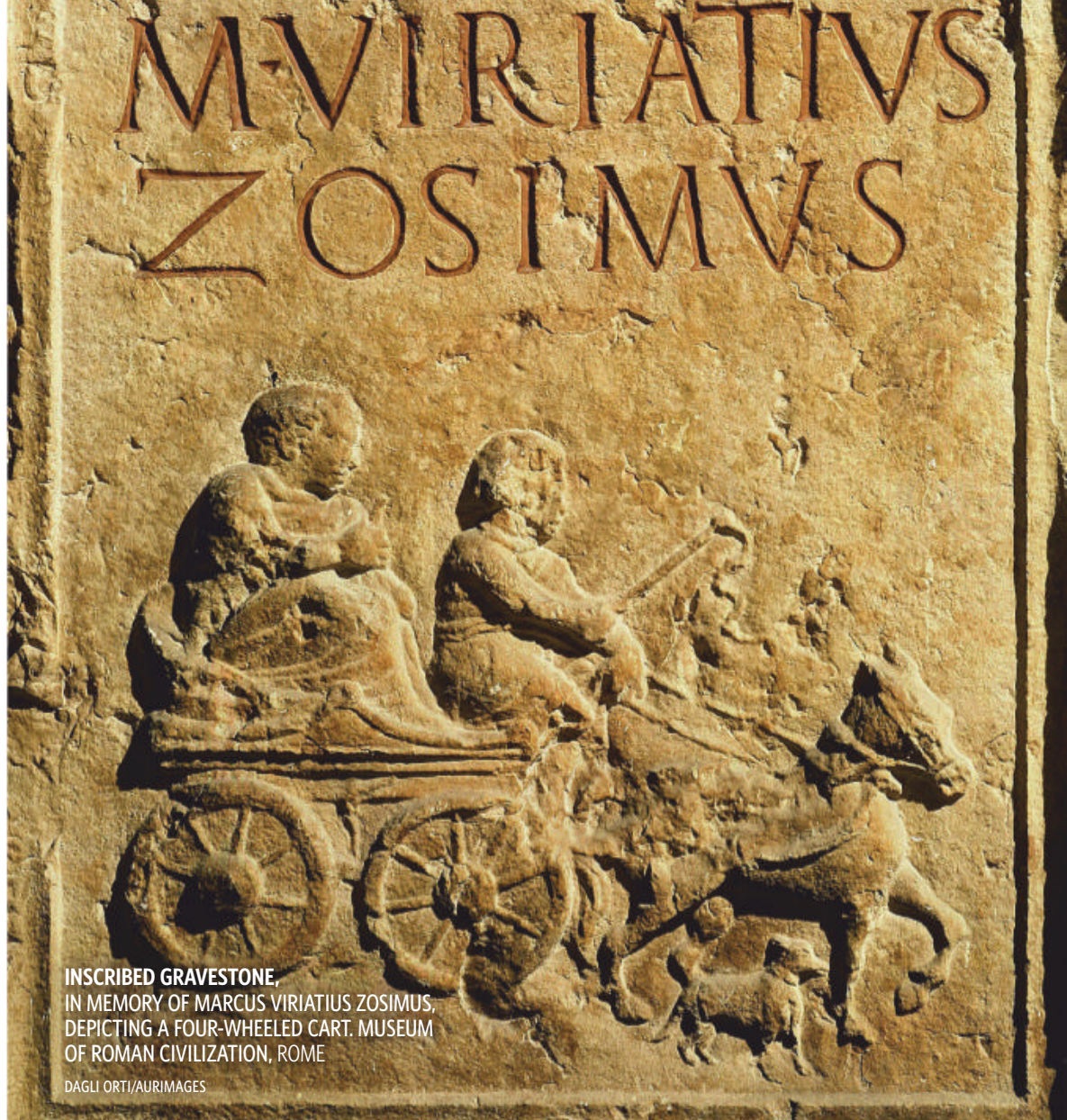
In hilly terrain attempts were made to even out the elevation through cuttings, bridges, and viaducts. In mountainous areas the engineers made wide curves, adapting to the land to maintain uniform slopes. In high mountains they used tight turns and even tunnels. Whenever possible, the road was laid out on the eastern and southern slopes to take advantage of the greater amount of sunlight to prevent winter snowfalls from impeding travel.

After a public bidding process, private contractors would be awarded the project to build a road. They hired laborers but also relied on enslaved people and criminals sentenced to forced labor. Sometimes they used the army and military engineers to design or direct the work. Legions also built roads as part of military operations and in conquered areas. Sometimes, when a legion was inactive, the commanders, or legates, decided to put the soldiers to work on road construction, as did the consul Gaius Flaminius, for example, whose men built the Flaminian Way from Rome over the Apennine Mountains to Ariminum (Rimini) in 220 B.C.

Ideally, the materials for road construction came from nearby quarries; if not, they might have had to be imported. The work began by clearing the ground of trees, rocks, and everything that could be an obstacle. The soil was drained, and rainwater runoff was diverted through channels and sewers. Then a ditch was dug and filled with large, loosely placed stones that allowed drainage. Medium-size boulders were added to compact the layer below and fill in large gaps, on top of which a layer of sand and

gravel was spread to provide a more comfortable surface for carts. These layers, which elevated the road above the surrounding terrain, were then compacted and hardened with water, hand tampers, and a large stone roller. The road was then flanked with curb stones. To the sides of the curbs large ditches were dug to receive the runoff from rain, a road's greatest enemy.

To complete the work, cylindrical stone posts were placed at intervals of one Roman mile (measured by a thousand steps, or the *milia passum*). These



INSCRIBED GRAVESTONE,
IN MEMORY OF MARCUS VIRIATIUS ZOSIMUS,
DEPICTING A FOUR-WHEELED CART. MUSEUM
OF ROMAN CIVILIZATION, ROME
DAGLI ORTI/AURIMAGES

CARTS AND DUST

IN A LETTER written around A.D. 65, the ancient author and philosopher Seneca drew a caricature of the nouveau rich on a journey: "They travel preceded by a squad of Numidian cavalry as bodyguards, and in front of them is a row of runners, since it is considered shameful not to have anyone to move aside others on the road, and, in raising a great cloud of dust, to show that an illustrious man is coming."



MADE FOR WALKING

The *caligae* was a leather, bootlike sandal with iron or copper studs on the soles. Strengthened by the studs, such footwear could last 600 miles of walking before wearing out.

DEA/ALBUM



CLEARING THE WAY

A relief on Trajan's Column in Rome (early second century A.D.) depicts Roman soldiers cutting down trees to clear the way for a road that would facilitate the advance of Roman troops during Trajan's war against the Dacians.

WORLD HISTORY ARCHIVE/AURIMAGES

milestones, which could stand over eight-feet high, marked the distances and gave credit to the person who sponsored the road's construction.

Today it can sometimes be difficult to identify an ancient road as Roman; because their building techniques were so successful, they were adopted again in the 18th century. In Roman times soldiers, farmers, and traders often wore shoes called *caligae*, which had studs on the bottom to protect their leather soles. Often these studs would fall off and get stuck in the road, leaving behind a valuable clue for future archaeologists to help prove a site's Roman origins.

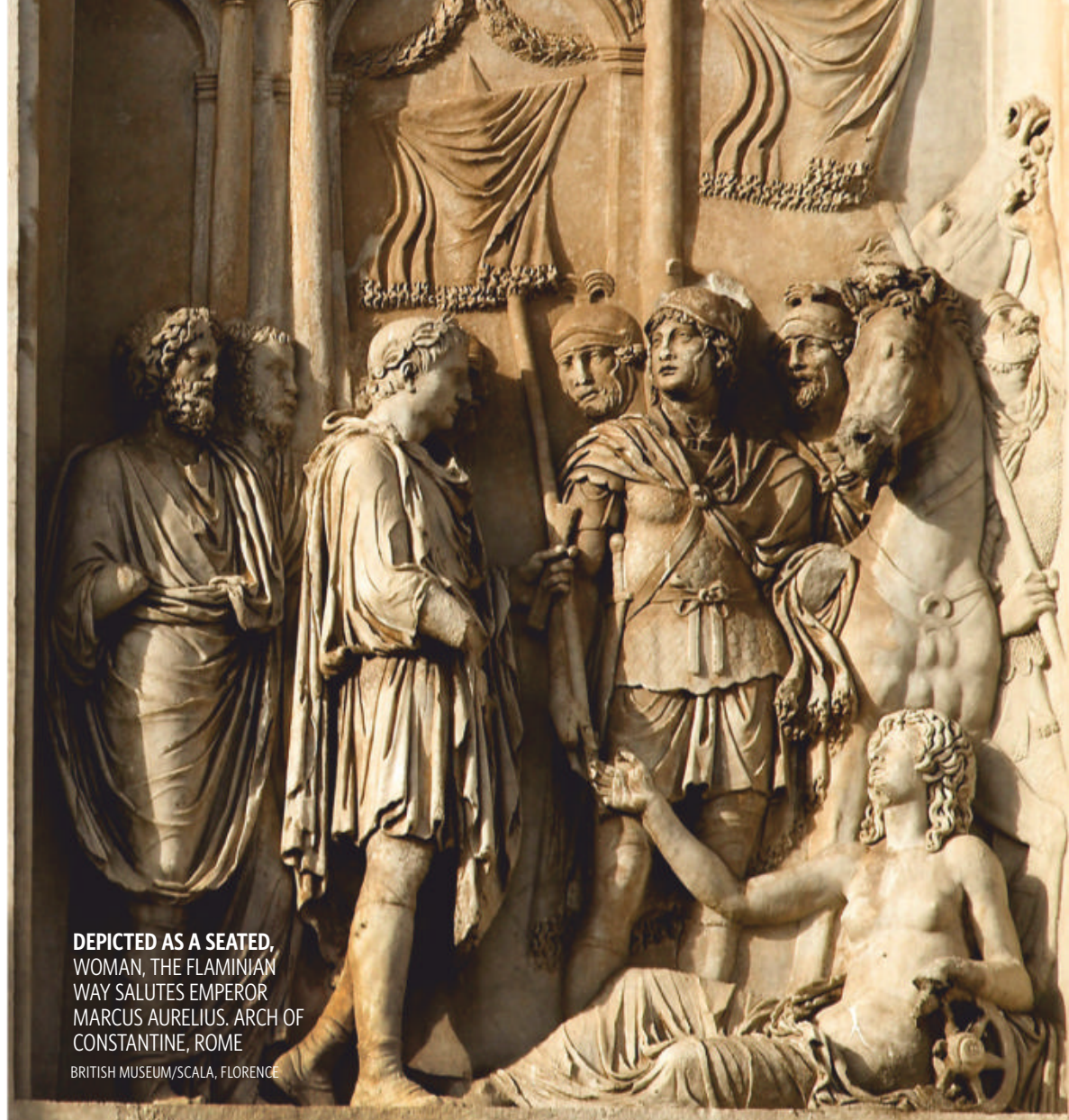
Resting Easy

Roman roads not only allowed for easier transport of soldiers, supplies, and trade, but also supported the growth of new communities and services. Many Roman roads were topped with a final layer of gravel; when passed over by a continuous stream of soldiers and carts, the roads grew dusty. Second-century A.D. Roman historian Suetonius alludes to this in his biography of Emperor Caligula:

He started the march and did it with such precipitation that the Praetorian cohorts, by necessity and against custom, had to affix their badges on their baggage to be able to follow each other. As he traveled in a litter carried by eight men, the troops followed so slowly that he demanded that the inhabitants of neighboring cities sweep the road and water it to cut back on the dust.

To help travelers stay fresh, they could stop at a *mansio*, an official service establishment that sprang up along Roman roads. Hostels and relay stations were located at a distance equivalent to one day's worth of travel, typically about 20 to 25 Roman miles. These facilities, grouped around a central courtyard, had stables and troughs for the horses, a place to eat, and sleeping quarters. Some offered public baths so travelers could wash off the dust.

As the Roman Republic and then the empire expanded, so too did its network of roads. The roads built during the republic enjoyed a renaissance under Augustus who reinvigorated the system for building and maintaining the roads. Augustus understood the vital importance of



DEPICTED AS A SEATED WOMAN, THE FLAMINIAN WAY SALUTES EMPEROR MARCUS AURELIUS. ARCH OF CONSTANTINE, ROME
BRITISH MUSEUM/SCALA, FLORENCE

THE FLAMINIAN WAY

PERHAPS SECOND IN IMPORTANCE only to the Appian Way for most of ancient Roman history, the Flaminian Way was built in 220 B.C. It set out from Rome, proceeding over the Apennine Mountains before ending in Ariminum (modern Rimini) on the coast. The Flaminian Way is alluded to in the fourth-century A.D. Arch of Constantine, on which it is personified as a woman, leaning on a wheel, seated at the feet of Emperor Marcus Aurelius.

these arteries, not only for moving armies and commerce along their paved paths, but also as a symbol: A network, created out of dazzling technical know-how, that united the growing empire, and brought its subjects the benefits of Roman rule. New roads were built in newly conquered lands in Britain and in Syria. Today many Roman roads have become the foundation for the major highways and byways in the former Roman world, a testament to the skill of the engineers who designed and built them. ■

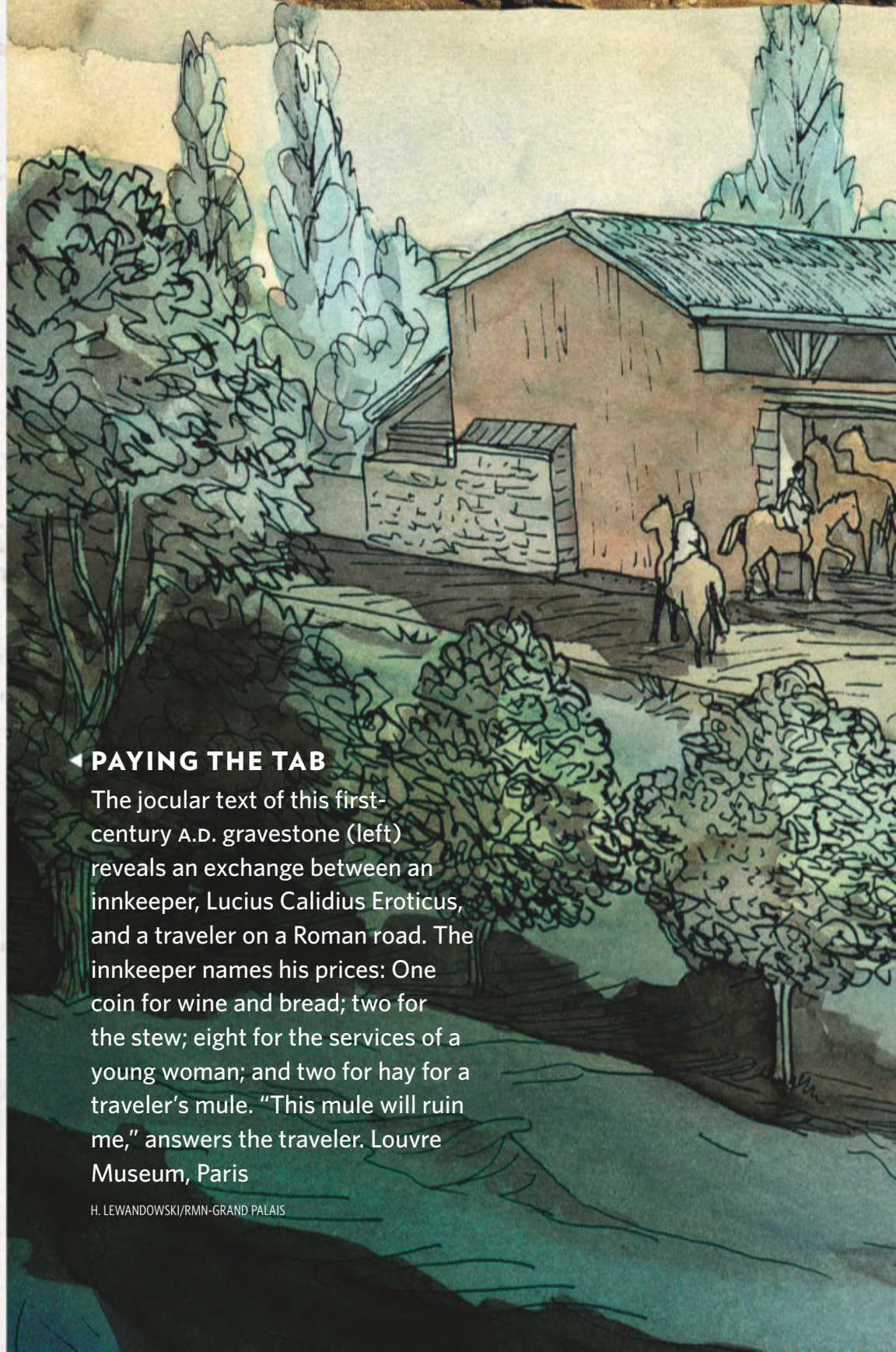
A SPECIALIST IN THE HISTORY OF ROMAN ROADS, JESÚS RODRÍGUEZ MORALES, TEACHES AT THE ANTONIO DE NEBRIJA UNIVERSITY, MADRID, SPAIN.



THE GOD MERCURY WAS THE PATRON OF MERCHANTS, BANKERS, AND TRAVELERS. BRONZE FIGURINE, FOURTH CENTURY B.C. LOUVRE MUSEUM, PARIS
ERICH LESSING/ALBUM

LIFE ALONG THE ROAD

Travelers along Roman roads knew that every 20 to 25 miles—the average length of a day's journey—they would find a *mansio*, an official “rest stop,” where travelers could stop and recharge. At first, these way stations were mostly used by the military, but they became frequented by merchants, government officials, and civilians. These roadside inns offered places to sleep, bathe, and eat. Some even had hot springs.



◀ PAYING THE TAB

The jocular text of this first-century A.D. gravestone (left) reveals an exchange between an innkeeper, Lucius Calidius Eroticus, and a traveler on a Roman road. The innkeeper names his prices: One coin for wine and bread; two for the stew; eight for the services of a young woman; and two for hay for a traveler's mule. “This mule will ruin me,” answers the traveler. Louvre Museum, Paris

H. LEWANDOWSKI/RMN-GRAND PALAIS



◀ RECOVERING FROM THE ROAD

A relief depicting travelers arriving at a *mansio*, an official “rest stop” found along Roman roads. Museum of Roman Civilization, Rome

DEA/ALBUM



RE-CREATION OF A ROADSIDE HOSTEL BY JEAN-CLAUDE GOLVIN.
20TH-CENTURY WATERCOLOR

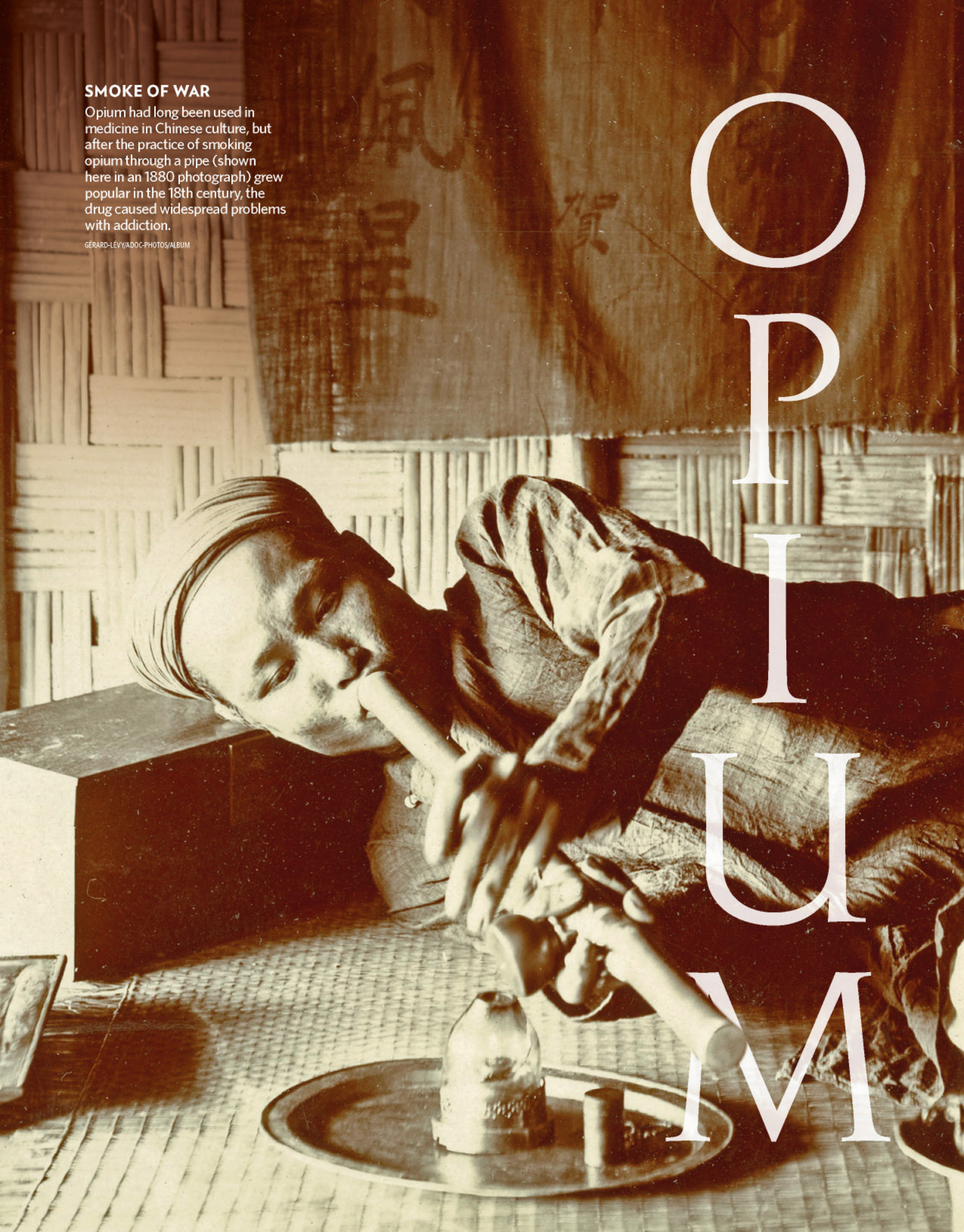
JEAN-CLAUDE GOLVIN. MUSÉE DÉPARTEMENTAL ARLES ANTIQUE
© JEAN-CLAUDE GOLVIN/ÉDITIONS ERRANCE

SMOKE OF WAR

Opium had long been used in medicine in Chinese culture, but after the practice of smoking opium through a pipe (shown here in an 1880 photograph) grew popular in the 18th century, the drug caused widespread problems with addiction.

GÉRARD-LÉVY/ADOC-PHOTOS/ALBUM

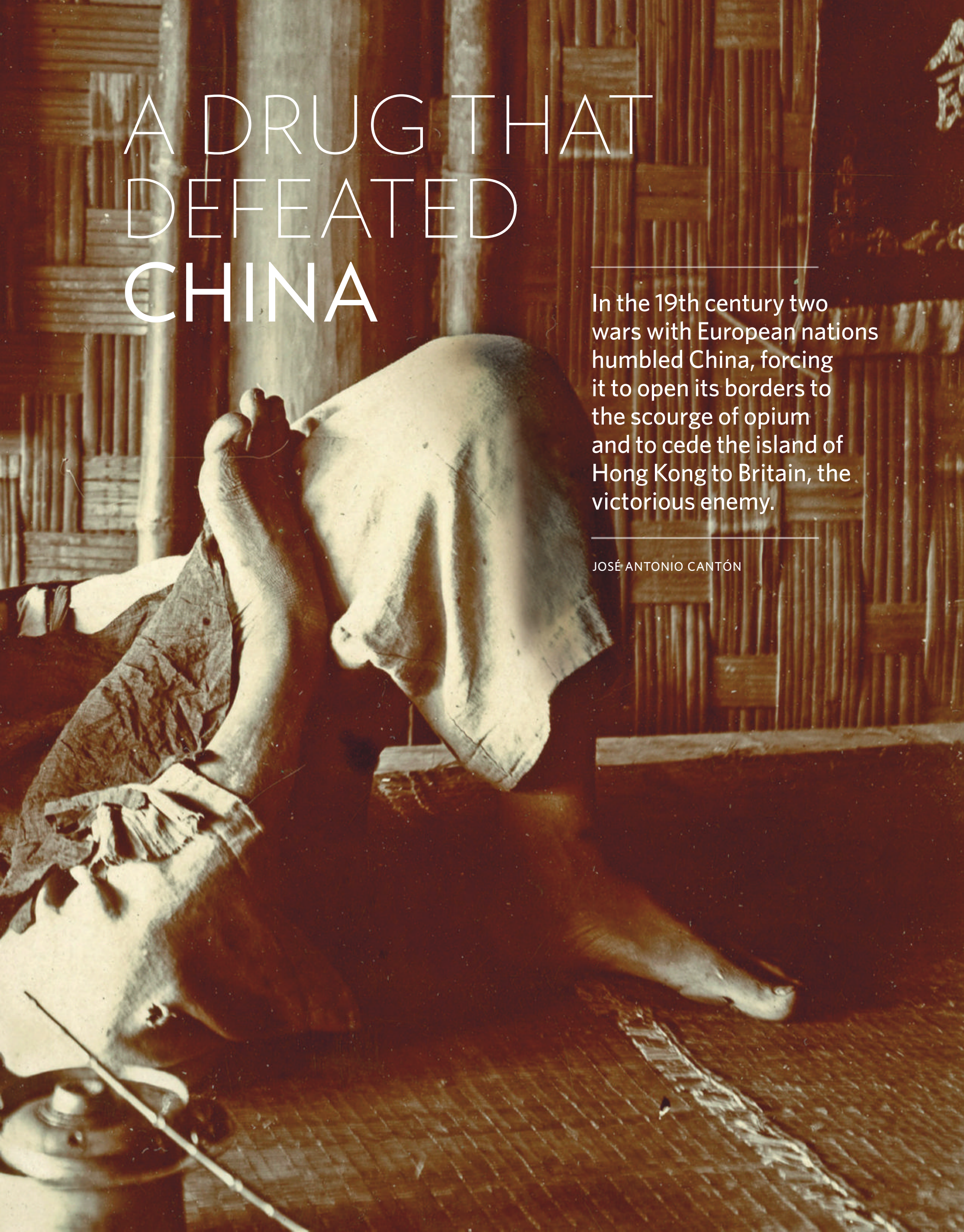
OP P I U M



A DRUG THAT DEFEATED CHINA

In the 19th century two wars with European nations humbled China, forcing it to open its borders to the scourge of opium and to cede the island of Hong Kong to Britain, the victorious enemy.

JOSÉ ANTONIO CANTÓN





EMPEROR DAOGUANG, THE SIXTH EMPEROR OF THE QING DYNASTY, RULED CHINA FROM 1820 TO 1850. HIS REIGN WAS MARKED BY A SERIES OF CALAMITIES, MOST NOTABLY THE FIRST OPIUM WAR (1839-1842).

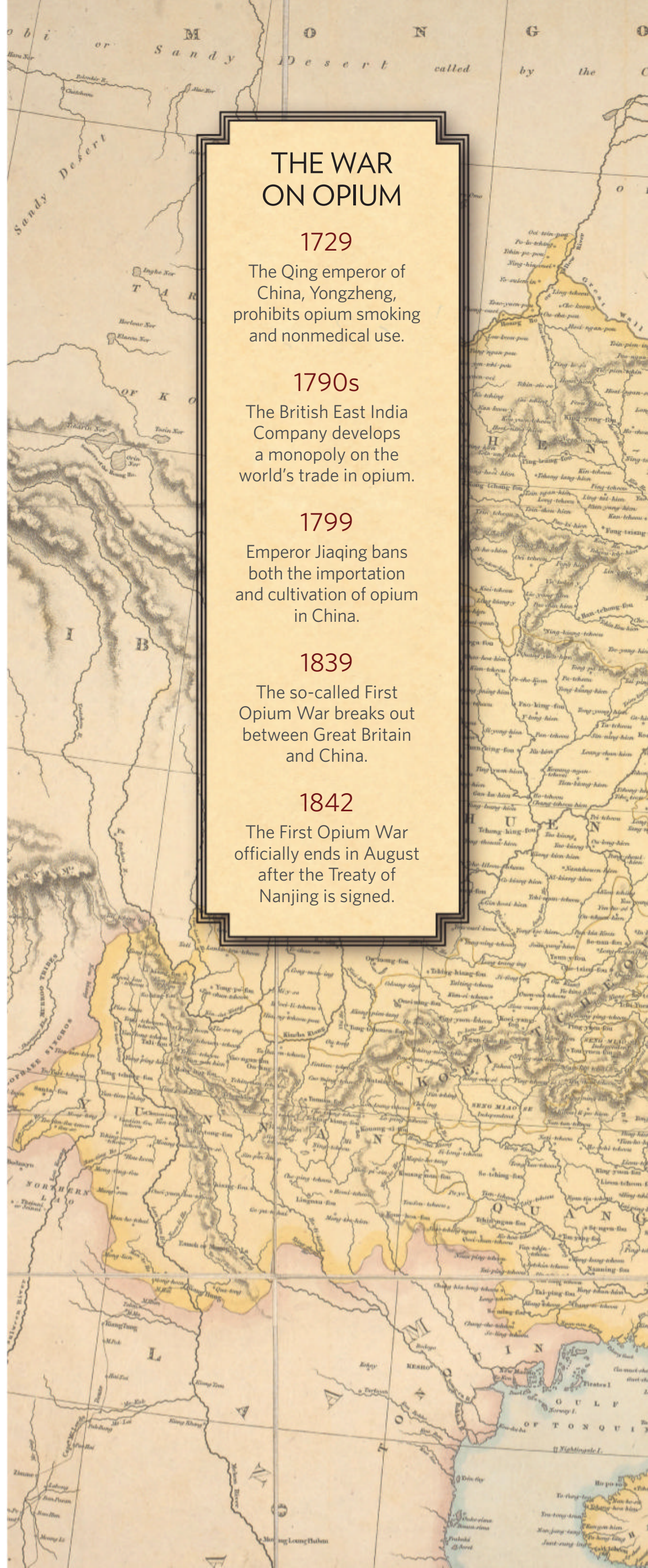
AKG/ALBUM

On October 1, 1949, Chairman Mao Zedong proclaimed the establishment of the People's Republic of China, ending the so-called century of humiliation in which European powers dominated Chinese trade policy. In 1842 the country, then under the rule of the Qing dynasty, was defeated by Great Britain in the First Opium War, which marked the beginning of the end for the Qing, the last imperial dynasty to rule China.

The defeat was not only humiliating to China, it was devastating to its people. Forced to open up to trade on Britain's terms, as well as ceding the island of Hong Kong, China was defeated by a nation more than 15,000 miles away. The Chinese imperial navy had collapsed before the Royal Navy's superior firepower. The conservatism of Qing rule under Emperor Daoguang and its reluctance to change had weakened by the 19th century, a time in which the world was being transformed by technology and global trade. In China today, the First Opium War remains a significant, some would say central, historic event that drives the nation's path in the 21st century.

The Seeds of War

Opium runs through the heart of this conflict. Its tragic use in a merciless struggle by the British to gain commercial supremacy has marked





Peking
(Beijing)

Nanking
(Nanjing)

1842

Chinkiang
(Zhenjiang)

Shanghai

1840

Chusan Island
(Zhoushan I.)

1841

Ningbo

Fuzhou

FORMOSA
(TAIWAN)

Amoy
(Xiamen)

1839

Canton
(Guangzhou)

1841

Kowloon

Hong Kong

1841

Macau

1841

Chuenpi

MAP OF CHINA
AND ADJACENT COUNTRIES.
PUBLISHED IN 1842 BY
W. H. ALLEN & CO., LONDON
BRITISH LIBRARY/BRIDGEMAN/ACI

Canton City
(Guangzhou) (Modern name)

1839

Major Battle

Ports opened by the
Treaty of Nanking

Map of
CHINA;
and the
ADJACENT COUNTRIES,
Drawn from the latest Surveys,
& OTHER AUTHENTIC DOCUMENTS.
Wm. H. Allen & Co.
London, Print, London

English Miles



ANCIENT REMEDY

WHEN A GREEN SEEDPOD of the plant known as *Papaver somniferum* is cut, a milky liquid oozes out. After it dries, a resin forms from which physicians have been able to extract medicine for millennia. History shows that poppies were being utilized some 4,000 years ago in Mesopotamia; clay tablets revealed the ancient Sumerians were calling it *hul gil* (the “joy plant”). Usage spread to other civilizations, including ancient Egypt and Greece. In the fifth century B.C., the ancient Greek physician Hippocrates (known as the father of medicine) noted opium’s efficacy as an analgesic and a narcotic. Medical use of opium continued to spread throughout the world, and its derivatives—such as morphine and codeine—are still used by physicians around the world today.

PAPAVER SOMNIFERUM, OPIUM POPPY, 19TH-CENTURY BOTANICAL ENGRAVING
BRIDGEMAN/ACI



both China’s view of the West and the West’s view of China. Made from the milky sap from the seeds of the *Papaver somniferum*, opium first arrived in China from India and Southeast Asia in the 15th century during the Ming dynasty. The drug became a component in traditional Chinese medicine, although its expense made its usage rare.

Recreational use only became popular in some parts of southern China at the beginning of the 18th century, after the Dutch introduction of the widespread practice of smoking the opium through a pipe. This process originated in Java, where opium would be liquefied into a substance known as *madak*. The spread of opium addiction to certain regions of China, such as the island of Taiwan and the nearby coastal provinces of



Fujian and Guangdong caused major social upheaval. Growing numbers of addicts placed a huge strain on Chinese society. In the 1830s it is estimated that there were around 10 million opium addicts in China and that deaths caused by the drug were in the millions.

Opium, Tea, and Silver

The economic consequences for China were no less grave. By the beginning of the 19th century, opium addiction began to affect the country far beyond the coastal areas where it was initially traded. Large amounts of silver were flowing out of China to pay for opium, which caused a silver shortage. As silver prices began to rise, the nation's farmers began to suffer. They used copper coins in their daily lives but paid taxes in silver.

An increasing shortage of silver meant the taxes they paid went up: Before 1820, one liang of silver (36 grams) was worth 1,000 pieces of copper; in 1827, it was worth 1,300 copper coins; 1,600 in 1838; and 2,200 or more by 1845.

The Qing rulers had been aware of the opium problem for decades, but their attempts to prohibit recreational use had proven ineffective. The Yongzheng emperor issued an edict in 1729 that banned smoking and selling commercial opium. In 1799 China banned opium completely,

THE QING RULERS HAD BEEN AWARE OF THE OPIUM PROBLEM FOR DECADES, BUT THEIR ATTEMPTS TO PROHIBIT RECREATIONAL USE HAD PROVEN INEFFECTIVE.

TRADE HUB

European warehouses line the shores of Canton, China, in a 19th-century painting (above). Before the First Opium War, Canton was the only port open to foreign traders. Maritime Museum, Greenwich, England

NATIONAL MARITIME MUSEUM/SCALA, FLORENCE



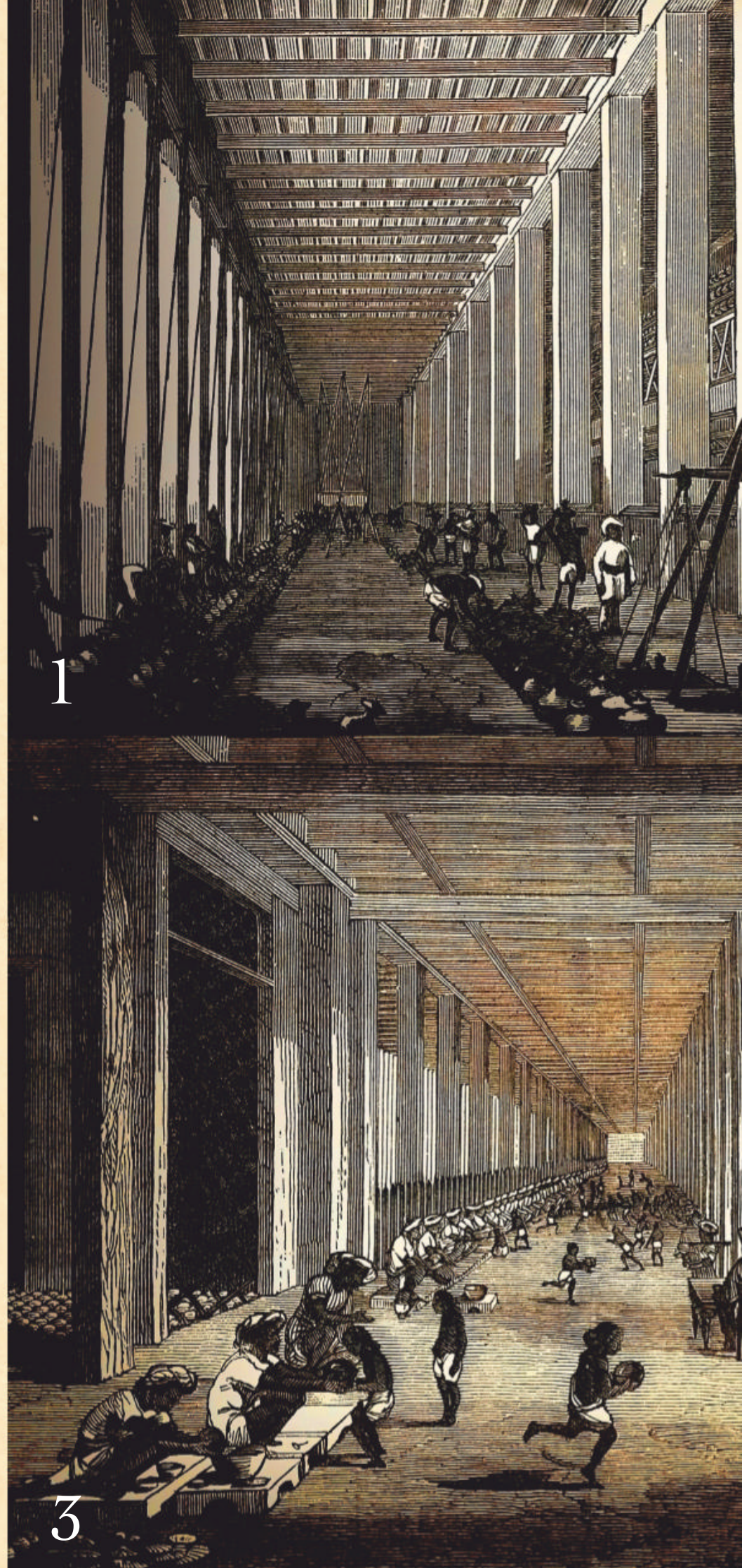
PATNA WORKERS CARRY AN OPIUM CRATE BEARING THE EAST INDIA COMPANY LOGO. 19TH-CENTURY ENGRAVING
BRIDGEMAN/ACI

THE SOURCE

INDIA'S GREAT OPIUM FACTORY

Opium destined for China was cultivated in Bengal in northeast India. The hub for the Bengali opium trade was Patna, a city on the Ganges River some 350 miles northwest of the port of Kolkata (Calcutta). The factory in Patna was run by the British East India Company, which had taken over an opium factory formerly run by the Dutch. It was surrounded by fields of poppies, which were planted in November, intensively irrigated during the three months of growth, and then harvested. The seedpods were opened to collect their milky sap, which was then dried and sent to the factory for processing. Large numbers of farmers in the area participated in poppy cultivation. Recent research suggests that many peasant farmers were coerced to give their land over to poppy cultivation. Captain Walter Stanhope Sherwill documented the procedures and practices in his book *Illustrations of the Mode of Preparing the Indian Opium Intended for the Chinese Market*, printed in London in 1851. These illustrations from the book (right) give great insight into the size of the operation and how many people were needed to run it.

CLIPPERS LOADED WITH OPIUM FROM PATNA SAIL TO KOLKATA (CALCUTTA) AND THEN TO CHINA. 19TH-CENTURY ENGRAVING
AKG/ALBUM



ARTOKOLORO/ALAMY/ACI

1 Inspecting

Factory workers receive unprocessed opium at the facility in Patna. Packed in numbered clay pots, the raw material will first be visually inspected by company officials. After the initial review, samples are then taken and chemically tested to determine their purity.



2 Mixing After inspection, the pots are taken to the mixing room, where their contents are poured into vats and stirred to create a uniform paste. Once it is ready, the resulting mixture will then be taken to the balling room.

3 Molding In this room, workers press the opium paste into brass molds that create a round shape. These cakes, which must all be the same weight, will then be covered with poppy petals. Records show that some workers made more than a hundred opium cakes a day.

4 Storing The cakes are left to dry and are then stored until they can be loaded onto ships. Workers will keep rotating the cakes as they dry and also check for damage from insects. They apply a layer of crushed poppy petals as an insect repellent.



BEATING THE WAR DRUM

Lord Palmerston (above, in an 1862 painting) was Britain's foreign secretary at the start of the First Opium War. His appeal to patriotism won support for the war.

QUINTLOX/ALBUM

but the prohibition encouraged the trade to go underground. A lucrative European smuggling ring emerged. Cultivated in Bengal (in modern northeast India), the drug entered China through the Portuguese enclave of Macau (then the only European colony in Chinese territory) and was taken to Guangzhou (called Canton in the West).

As China's largest commercial port, Canton was Europe's only trading gateway with China. Beginning in 1757, the Qing had confined all incoming foreign trade to the southern port to avoid unfettered access, an arrangement known

as the Canton System. Despite these controls, corrupt local governors in Canton had habitually turned a blind eye to the opium trade. European ships were rarely inspected.

This situation drastically changed in the early 19th century when the opium trade with China became a commercial priority for the British Empire, in particular for its largest trading company in Asia: the East India Company. Following Britain's conquest of Bengal in the mid-1700s, and France's wars for control of the Indian subcontinent, the company's finances were unstable. The company needed constant loans from the British government. At the same time, Britons' growing fondness for tea had made it the most desired overseas product in Britain. At the time, tea could only be purchased from China in exchange for silver. The British tried for decades to find something that would address its trade imbalance created by tea imports.

Stemming the outflow of silver from Britain to China was the goal of a British delegation led by Lord George Macartney, who arrived in Beijing (known in the West as Peking) in 1793 for negotiations with the Qianlong emperor. The talks, however, did not go well. The Chinese expected the visit to follow traditional norms: The Britons would bring tribute in return for trading opportunities. They would also demonstrate their inferiority to the Chinese emperor through elaborate deference. British intentions, however, were for Britain and China to trade as equals and establish modern diplomatic relations. The inventions they brought—telescopes, and weapons—were intended to stimulate Chinese interest in British products, but the emperor regarded them as little more than interesting trinkets.

In Bengal, meanwhile, the East India Company was facing increasing difficulty in retaining its monopoly. More and more traders tried to circumvent British controls in Bengal to buy cheaper opium and sell it at a greater profit in China. In parallel, the philosophical spirit of the times was changing, and inspired by the ideal of free trade, the British government ended the company's opium monopoly in 1834. Other traders—many, though not exclusively, British—piled on to the opium trade, and by 1835 the opium sold to Chinese merchants had quadrupled in relation to the decade before. By 1839 opium sales to China were paying for the entire tea trade.

IN THE EARLY 19TH CENTURY, THE OPIUM TRADE WITH CHINA BECAME A COMMERCIAL PRIORITY FOR THE BRITISH EMPIRE.



LIN ZEXU (UPPER RIGHT)
OVERSEES THE DESTRUCTION OF
CHESTS CONTAINING OPIUM IN
1839. 19TH-CENTURY ENGRAVING
BRIDGEMAN/ACI

Crackdown in Canton

The new opium boom gave Britain what it had wanted: a reverse of the trade imbalance with the Qing empire. The vast reserves of silver that China had built up over the centuries began to dwindle. This shortage, coupled with other problems such as increasing corruption in its political system, caused a severe recession that forced the imperial authorities to take a more direct approach to solving the opium problem.

In 1838 the emperor Daoguang entrusted Lin Zexu, the then governor of the Hunan and Hubei provinces (and one of the most ardent advocates of opium prohibition in China), with investigating the situation in Canton. Lin discovered that the entire Cantonese customs system was involved in opium smuggling. At the same time,

A LETTER TO THE QUEEN

IN 1839 LIN ZEXU, China's imperial commissioner tasked with tackling the opium scourge, sent Queen Victoria an impassioned letter of which an excerpt follows. No reply was received.

Moreover, we have heard that in London . . . as also in Scotland, Ireland, . . . no opium whatever is produced. It is only in sundry parts of your colonial kingdom of Hindostan [India], such as Bengal, Madras, Bombay, Patna, Malwa, Benares, Malacca, . . . year by year, the volume of the poison increases, its unclean stench ascends upwards, until heaven itself grows angry . . . You, the queen of the said honorable nation, ought immediately to have the plant in those parts plucked up by the very root! . . . and if any man dare again to plant in these grounds a single poppy, visit his crime with the most severe punishment.

LIN SENT A LETTER TO QUEEN VICTORIA IN 1839, ASKING HER TO BAN THE OPIUM TRADE WITH CHINA. HE RECEIVED NO RESPONSE.

Britain's trade representatives refused to hand over their opium shipments.

Lin sent a letter to the young Queen Victoria in 1839, asking her to ban the opium trade with China as he believed she had done in Britain (she hadn't. Regulating opium in Britain didn't begin until 1868). He appealed to her sense of decency and fairness:

I have heard that you strictly prohibit opium in your own country, indicating unmistakably that you know how harmful opium is. You do not wish opium to harm your own country, but you choose to bring that harm to other countries such as China. Why?

Lin did not receive a response (it is unknown whether his request was lost in transit or outright ignored). Resorting to force, Lin purged the customs system, besieged the district where European traders were based, confiscated thousands of chests of opium, and burned them on Humen beach.

Relations rapidly deteriorated. After British sailors murdered a local peasant in July 1839, the British chief superintendent for trade in China, Charles Elliot, refused to hand the culprits over to the Chinese authorities. This action so infuriated Lin that he banned the sale of provisions to British ships. The British, led by Elliot, responded by trying to force ports such as Kowloon (part of Hong Kong today) to sell to the British, which resulted in a series of naval clashes. The two powers were at war.

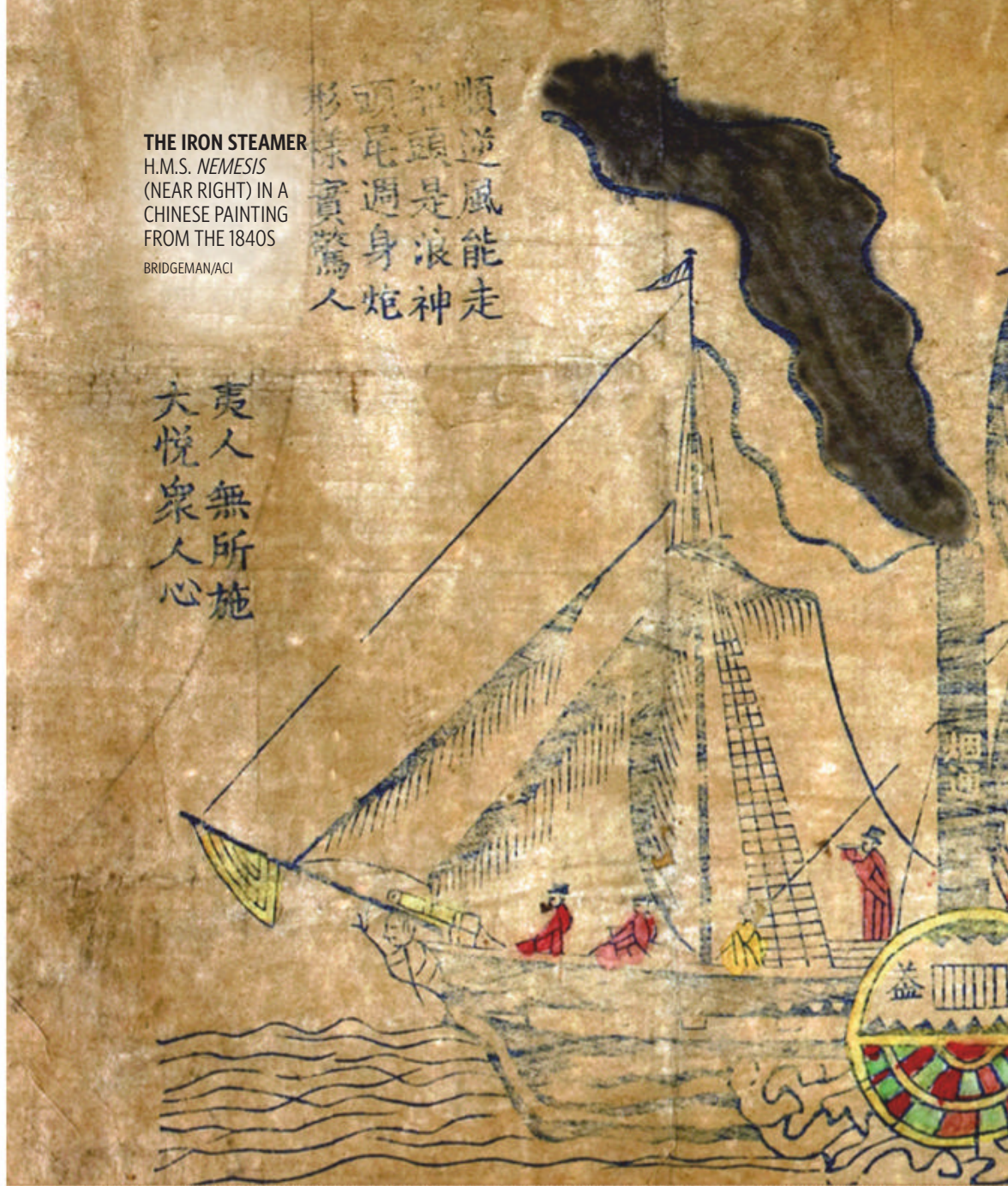
On a War Footing

In Britain an important sector of public opinion considered the opium trade to China immoral. But as news filtered back from China about the treatment of British officials and the destruction of cargoes, a notion of Qing stubbornness and arrogance started to take root.

The British Parliament eventually decided to send a military expedition to China in October 1839 in response to pressure from British and other Western traders. The British secretary of state for foreign affairs, Lord Palmerston, sent Elliot a list of stiff demands for a cessation of

THE IRON STEAMER

H.M.S. NEMESIS
(NEAR RIGHT) IN A
CHINESE PAINTING
FROM THE 1840S
BRIDGEMAN/ACI



DESTRUCTIVE TECHNOLOGY

CHINA'S IRON NEMESIS

The industrial age gave Britain a massive military advantage over China in the 19th century. A product of the British industrial powerhouse, and a symbol of the new, pitiless tactics of global imperialism, the H.M.S. *Nemesis* was the world's first oceangoing iron warship. Launched in Liverpool in late 1839, the ship had been commissioned by the East India Company with the express purpose of wreaking havoc on the Chinese fleet. *Nemesis* fulfilled the goal spectacularly: Compared with the large, cumbersome Chinese junks, *Nemesis* proved remarkably agile. Although the engines driving the two paddles were not especially powerful, the flat-bottomed design enabled it to sail in areas inaccessible to other ships. It could easily penetrate narrow waterways—an ideal feature in a war that would be played out in river deltas. *Nemesis* played an essential role in disabling Chinese river defenses, such as at the Chuenpi forts in 1841, which opened the way for the British capture of Canton.



BRITAIN'S FIRST TARGET WAS ZHOUSHAN ISLAND IN THE YANGTZE DELTA. THE FORTRESS THERE FELL IN A FEW HOURS.

hostilities, including preferential trade for the British in China, and the opening up of five ports (including Canton) to international trade.

In June 1840, after months of preparations, a British fleet of 40 ships and nearly 19,000 soldiers entered Chinese waters. Their first target was not Canton, but Zhoushan Island (Chusan, as it was then known in the West), strategically situated near Shanghai and the mouth of the Yangtze. The fortress there fell in a few hours.

After this show of strength, the British, under the command of Elliot, refocused on the Pearl River Delta and the main prize: Canton. Having captured Chinese forts on Chuenpi and other islands in the delta, in spring 1841, they raised the Union Jack above the commercial district in Canton. In May reinforcements from Hong Kong repulsed a fierce Qing counterattack, and the British grip on Canton was strengthened.

The war continued along the coast, with Britain occupying Ningbo in the fall of 1841. By the spring of 1842, Shanghai had fallen, and the Yangtze lay open to the Royal Navy. From here, they set their sights on Zhenjiang (Chinkiang), a city near Nanjing (traditionally called Nanking by Westerners) at the southern end of the Grand Canal, which fell in July. Faced with an imminent invasion of Nanking and the impossibility of using the Grand Canal to bring Chinese troops from the north, the Qing authorities gave up.

The peace negotiations between the British and the Chinese culminated in the Treaty of Nanjing in



TREATY OF NANJING

Signed in August 1842, the treaty (left) marked China's forced entry into the global market. Several copies of the treaty were made, one of which was immediately dispatched to London for Queen Victoria to ratify.

BRIDGEMAN/ACI

August 1842. Five Chinese ports—Canton, Amoy (Xiamen), Fuzhou, Ningbo, and Shanghai—would now be open to the British. China also had to pay restitution of 20 million silver dollars and cede Hong Kong to Britain in perpetuity. A supplementary treaty signed in October 1843 granted even more privileges to the British in China, including most favored nation status.

Long Shadows

Conflicts between Europe and China continued. In 1856 a second opium war broke out as China faced both Britain and France. Following the end of the war in 1860, the Qing were defeated again and had to make more concessions to these European powers. The wars confirmed Britain as a global superpower, but some felt uncomfortable





about forcing opium on China to exploit its riches. The future prime minister, William Gladstone, wrote: “I am in dread of the judgments of God upon England for our national iniquity towards China.”

Even so, the mainstream British response to the wars was decidedly imperial. Adding insult to injury, a racist stereotype of the indolent, opium-addicted “Chinaman” emerged in British culture, including Charles Dickens’s description of Chinese people in a London opium den in his unfinished 1870 novel *The Mystery of Edwin Drood*. The hypocrisy was twofold in ignoring both the British role in fostering that addiction and the problem of opium in Britain itself.

The legacy of the Opium Wars cast a long shadow in China that continues to influence

the nation today. The humiliating terms of surrender lingered in the national consciousness. After the establishment of the People’s Republic of China in 1949, the Communist authorities drew a line between the “liberated” China of the present and the “humiliation” of the past. Emphasizing the wars as object lessons, modern Chinese interpretations of this history emphasize the West’s colonial “arrogance” and imperial China’s vulnerability because of a failure to keep pace with technology and innovation. ■

JOSÉ ANTONIO CANTÓN IS A POSTDOCTORAL FELLOW OF THE BRITISH INTER-UNIVERSITY CHINA CENTRE IN THE UNITED KINGDOM.

Learn more

BOOKS

The Opium War: Drugs, Dreams and the Making of Modern China. Julia Lovell, Harry N. Abrams, 2015.

ABOARD THE CORNWALLIS

John Platt’s 1846 painting (above) depicts the signing of the Treaty of Nanjing on the H.M.S. *Cornwallis* in August 1842. Three Chinese dignitaries sit at the table along with the British translator.

BRIDGEMAN/ACI

HONG KONG RETURNS

China ceded Hong Kong to Britain under the terms of the 1842 Treaty of Nanjing. The mountainous island has little in the way of water or resources, but its position at the mouth of the Pearl River grants it enormous strategic importance. Like the nearby Portuguese colony of Macau, its deep, well-protected port was on the main trade routes from the Far East. At the end of the Second Opium War in 1860, China ceded the Kowloon Peninsula on the mainland, facing Hong Kong. British rule over the area was extended under a convention signed in 1898, which leased the enclave to Britain for 99 years. In 1984 a Sino-British joint declaration arranged for Hong Kong to become part of China again in 1997.



BRIDGEMAN / ACI



PORT OF HONG KONG. 19TH-CENTURY ILLUSTRATION
BRIDGEMAN/ACI

British Arrivals

Although the ceding of Hong Kong was formalized in 1842, the island had been occupied by British forces since 1841, an event re-created in this 1920s lithograph. Following occupation by Japan in World War II, Hong Kong began a long period of prosperity and became an economic powerhouse in Asia.

Return to China

As Hong Kong's return to China neared, speculation grew over whether China would impose its one-party system on the island. In July 1997, upon Hong Kong's return, China announced that Hong Kong would be ruled under the principle of "one country, two systems." Attempts to change this approach have met with local protests. The most recent began in 2019 and extended in 2020.

THE TIMES

No. 65,930 TUESDAY JULY 1 1997 35p

ADVENTURES OFFER
Nigeria
HALF-PRICE ADVENTURE SPORTS
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WHEN WILLIAM MARRIES FFION
The wedding of the year
PAGE 14

GET HIP, PLAY BRIDGE
Susanna Gross puts her cards on the table
PAGE 19

THE WORST WASHOUT
Libby Purves tries to rein in her disappointment
PAGE 22

Final farewell to Hong Kong

Chinese promise to preserve laws and democracy

FROM DAVID WATTS AND JONATHAN MEIKYEN IN HONG KONG

BRITAIN plotted Hong Kong's most successful modern colony, to the Government of China last night in ceremony which were by turns occasionally emotional and somber.

In the end, the handover from capitalist to communist state was carried through smoothly — despite the hiccups of the past few days — and Britain got the anniversary it sought. President Jiang Zemin welcomed his country to "warmly and generously" administer the joint agreement between the two countries and to preserve Hong Kong's political system and its laws fundamentally unchanged.

Most importantly, the Chinese leader committed his country to allow Hong Kong to develop its democratic system in a manner suitable to the Hong Kong reality. These were the words the Hong Kong people and the British representatives had hoped to hear. Once uttered, the atmosphere quickly materialized as Mr. Jiang went on to reassure his audience that Hong Kong's importance as an economic centre would be maintained, and he added: "Only in 1997 will go down in the annals of history as a day that marks the end of an era."

Even so, on the occasion, "Hong Kong" was not the only word that came out of the Chinese leader's mouth. Earlier, the Prime Minister, reading a message on behalf of the Queen, had put China on notice that in consideration under the Joint Declaration must be met, the said "Hong Kong" has shown how East and West can learn to live and work together. It has brought us together and enriched all of us. Britain has been privileged to be responsible for the people, especially those Hong Kong, had been so successfully successful.

The most serious moment in all the ceremony of the arrangements for both sides had been to ensure that, in daylight and the hour of handover approached, there should be five seconds before the waving hour between the Life Guards and the Queen and the raising of the flag of China and the new Special Administrative Region. Five seconds for the Chinese and the British to wave their flags, the national anthems, in the end, the Chinese gave him 25 seconds.

The ceremony had started with the Chinese in wide-eyed amazement at finding themselves on Hong Kong territory after 156 years of turbulent anti-colonial history and not a little afraid of the reception they might get. It was brief and nervous, at the Chinese had waited, with the formal lowering of the Union Flag and the raising of the flag of the People's Republic of China and that of the Hong Kong Special Administrative Region, but it ended with President Jiang taking the English of which he is proud to be part of the British Empire.

The deed done, the official party moved off to the ceremony, and President Jiang, who the new leader Governor and Mrs. Patten had greeted in a room of friends waiting to see them off, soon returned to his room and heading for his home in Beijing.

At dawn today the Chinese were seen across the border, more than 5,000 soldiers of the People's Liberation Army and 21 armoured units.

The day of the handover had begun with the first of a series of ceremonies a moving moment as the Governor and his family left Government House for the last time. China Patten accepted the United Kingdom flag of the Governor.

There, on the plane, played High-land Cathedral, the Governor's favourite tune. There was an speech from the departing her, as she was to leave. He was driven out of the gates of Government House, for the Governor's last journey.

Mr. Patten was cheered to the skies. He has been a popular Governor and never once in the of late. He offered Hong Kong's democratic leaders a list of what they should have had long ago. Politicians who once accused the British of imperialism in Beijing are doing so no longer. The no-hat boycott of last night's banquet and government inauguration are an ironic comment of Mr. Patten's vision. He has made politics matter in Hong Kong. The South China Morning Post last night, conducted this week, had 50 per cent of Hong Kong residents saying they would still prefer to remain British and show Mr. Patten's rock rules to the end.

Yet China's claim is right. As the govern moved from the golden parade ground to the large new convention centre, the Chinese leadership arrived to assert it. They were greeted by a staggering display, parking garages of state into the cloudy clouds and, shouting, fireworks down on Kowloon. The Chinese are promising an even last night on page 2 and 3.

Mr. Patten said he was the twentieth and last to hold his office. "Hong Kong people are now to run Hong Kong," he said. "That is the promise and that is the inevitable destiny." The Patten edge was done in the end. Hong Kong now have political liberty and economic freedom, but he said they must now look to themselves.

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END OF AN ERA
Chris Patten and the Prince of Wales on Hong Kong last night before she sailed from Hong Kong

where dragon dancers performed and a loudspeaker blasted out patriotic fanfare songs. Some villagers strapped cars carrying Chinese army officers and gunned them with flowers. Four thousand troops and 21 armoured units.

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CATCH THE HARVEY



GLORY OF EGYPT

The fantastic frontispiece from the second edition of the *Description of Egypt* is just one of the many breathtaking illustrations produced by the Egyptian expedition.

Opposite: During the expedition, the Rosetta Stone was discovered by the French but later seized by the British. It is now in the British Museum, London.

BOTH IMAGES: BRIDGEMAN/ACI



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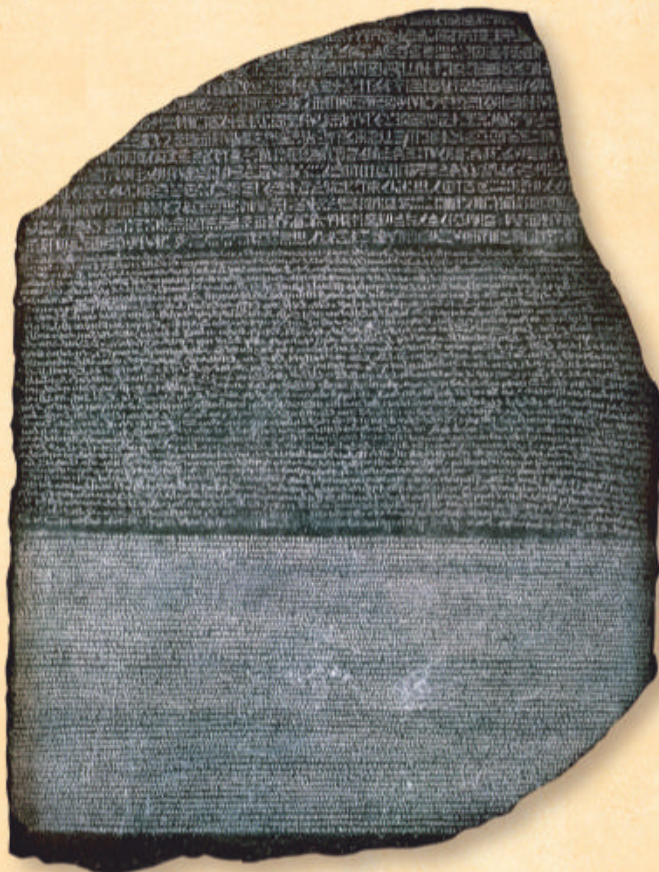
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France's Pharaonic Fascination

NAPOLEON IN EGYPT

Napoleon's Egyptian campaign might have been a military failure, but it was a victory for history. French scholars sent to study Egypt were captivated by its rich culture and kicked off a period of "Egyptomania" in Europe.

MIGUEL ÁNGEL MOLINERO





MONUMENTAL VIEW, DESCRIPTION OF EGYPT, VOLUME 1, 1809

DEA/ALBUM

By the end of the 18th century, France wanted to conquer Egypt. At war with Britain, France sought to disrupt its enemy's dominance of the seas and its trade routes with India; taking control of Egypt would give France a foothold from which to expand in the Mediterranean. An ambitious Corsican general, Napoleon Bonaparte was given command of the mission. Already renowned for his campaigns in Italy, Napoleon led French forces to Egypt in 1798 to fight against the local rulers. Known as the Mamluks, they controlled the North African territory, which was then part of the Ottoman Empire.

While the expedition's chief aim was martial, it had a secondary purpose: to collect scientific and historical information about Egypt, which many in France believed was an ancient civilization equivalent to classical Greece and Rome. Along with 35,000 soldiers, more than 160 scholars and artists traveled to Egypt in 1798. Officially known as the Commission of the Sciences and Arts of Egypt, this group would end up making a greater contribution to history than the French fighting forces. Their careful work, carried out over many years, would give birth to the field of Egyptology in Europe and reveal to the world the history of the grand civilization that had ruled along the Nile for millennia.



BATTLE OF THE PYRAMIDS

The battle between the French army and local Mamluk troops, on July 21, 1798, took place in Imbabah, farther from the pyramids than this 19th-century painting by François-Louis-Joseph Watteau suggests. Museum of Fine Arts, Valenciennes, France

BRIDGEMAN/ACI



Soldiers and Scholars

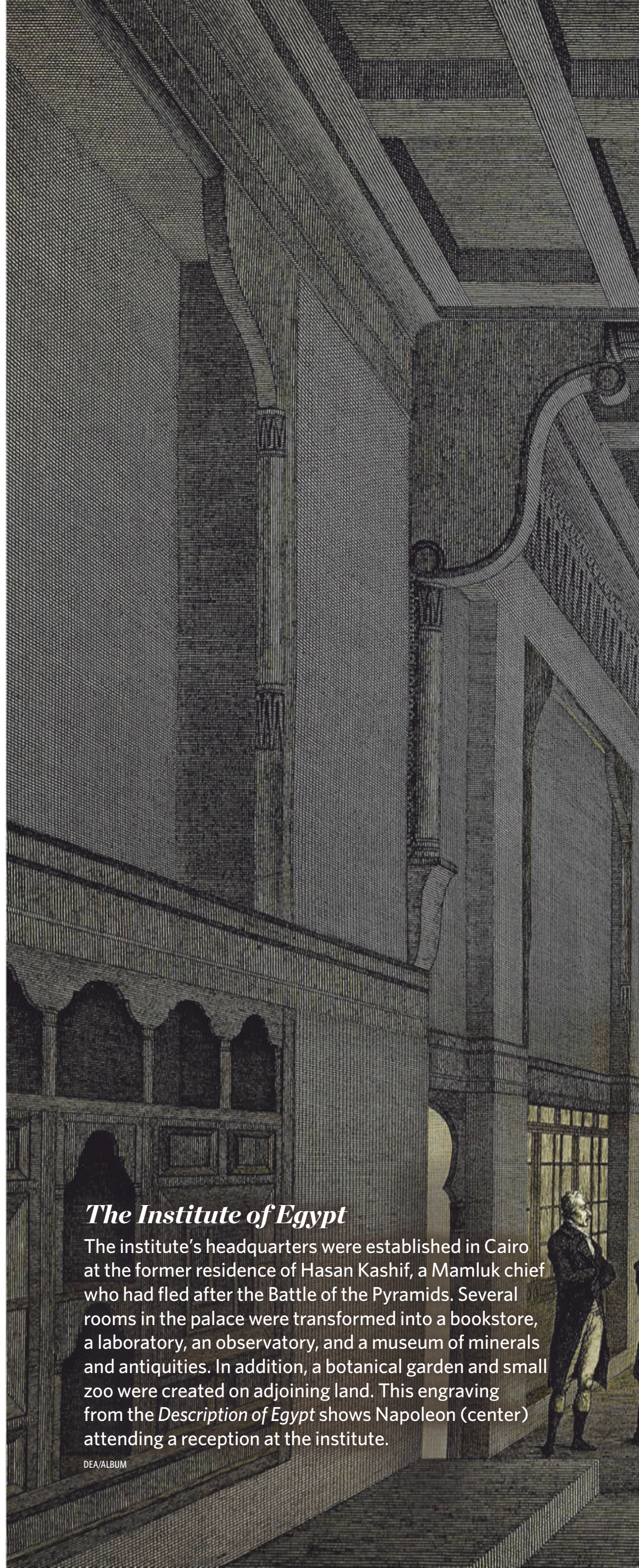
In early July 1798, the French fleet landed near Alexandria and easily captured it. French troops advanced on Cairo and took the city on July 21, after winning the Battle of the Pyramids, also called the Battle of Embabeh. Despite these initial victories, the military mission began to flag. France did not have enough men to establish sufficient garrisons, which limited its military presence to the capital city and certain areas of the Nile Delta. British naval forces were lurking offshore in the Mediterranean and succeeded in sinking the French fleet stationed off the coast of Egypt in August. Napoleon and his forces were effectively stranded. The land campaigns continued with some success, but Napoleon also had to suppress local revolts and losses of men not only to battle but also disease.

In 1799 Bonaparte decided that Egypt held nothing more for him and returned to France, leaving his men under the command of General Jean-Baptiste Kléber. Kléber scored a few victories before his death in June 1800. His successor, General Jacques-François de Menou, faced insurrections in Cairo and attacks from the British that ultimately forced him to sign a capitulation in Alexandria in September 1801. All French troops were allowed to evacuate to Europe.

Scientific Successes

In stark contrast to the failure of the military mission, the scientific expedition was enjoying tremendous success. Led by two veteran scholars—mathematician Gaspard Monge and chemist Claude-Louis Berthollet (who both served with Napoleon in Italy)—its many participants were at the beginning of their careers. In August 1798 the Institute of Egypt was formally organized in Cairo; Monge was elected its president, and Napoleon, vice president. The institute was organized into four sections: mathematics, literature and fine arts, natural history and physics, and political economics. The institute's founding act stated it was not only to research the nature, economics, and history of Egypt, but also to contribute to advancing the principles of the Enlightenment in Egypt and to assist its government.

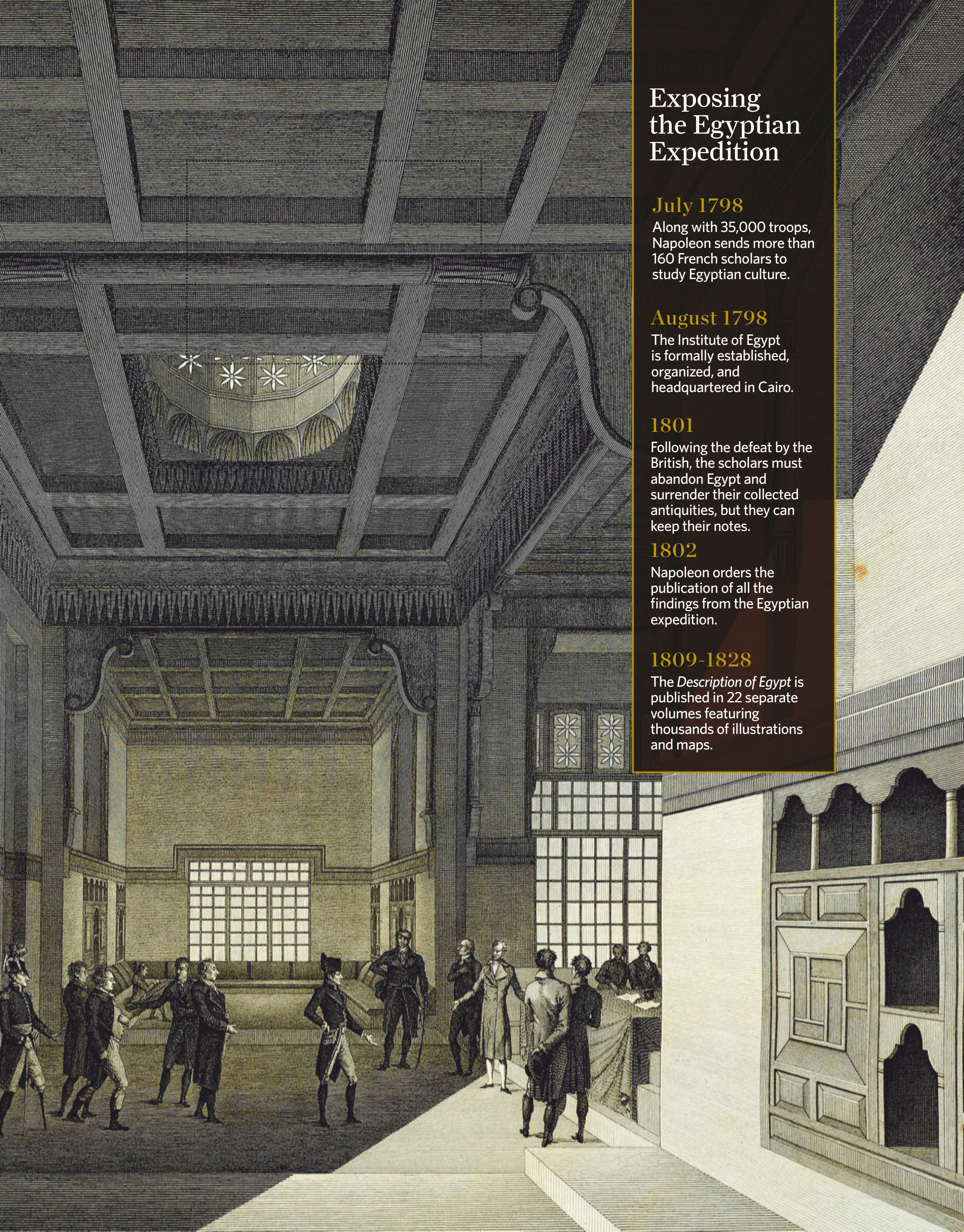
At first, French scholars were posted to the institute's Cairo headquarters, but others began to travel around the country to fulfill their duties. One member, Dominique-Vivant



The Institute of Egypt

The institute's headquarters were established in Cairo at the former residence of Hasan Kashif, a Mamluk chief who had fled after the Battle of the Pyramids. Several rooms in the palace were transformed into a bookstore, a laboratory, an observatory, and a museum of minerals and antiquities. In addition, a botanical garden and small zoo were created on adjoining land. This engraving from the *Description of Egypt* shows Napoleon (center) attending a reception at the institute.

DEA/ALBUM



Exposing the Egyptian Expedition

July 1798

Along with 35,000 troops, Napoleon sends more than 160 French scholars to study Egyptian culture.

August 1798

The Institute of Egypt is formally established, organized, and headquartered in Cairo.

1801

Following the defeat by the British, the scholars must abandon Egypt and surrender their collected antiquities, but they can keep their notes.

1802

Napoleon orders the publication of all the findings from the Egyptian expedition.

1809-1828

The *Description of Egypt* is published in 22 separate volumes featuring thousands of illustrations and maps.

Mapping the Pyramids

In the chapter on the Great Pyramids at Giza in the *Description of Egypt*, the engineer-geographer Edme-François Jomard wrote: "Each of the Great Pyramids covers or hides a space so vast that it is impossible at first sight to figure out precisely its respective location. A topographical plan [pictured on this page], raised geometrically, was therefore indispensable for an exact and faithful description of the site. Colonel Jacotin took charge of this task, and I supported him by measuring the sides and heights of the pyramids, as well as the monument to the east and the immense road leading to the third pyramid (the one covered with granite)." *Sables*

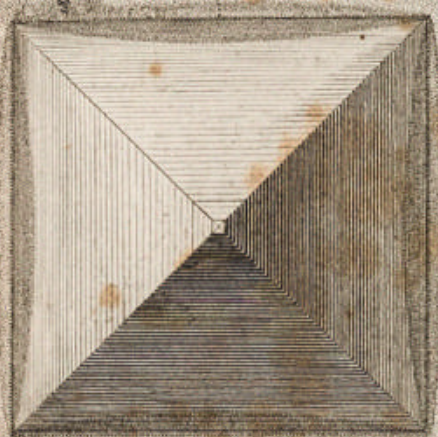
BRIDGEMAN/ACI



Sables

PYRAMIDE

Traces d'un Fosse



GRANDE PYRAMIDE

B



Pyramides
ruinées

Petits
Tombeaux

Puits

Puits

GRANDE

LA

DE

MÉRIDIENNE



Ruines

Catacombe
Sculptée

Rochers taillés

Sphinx

Constructions
ruinées

Sables

Terres
cultivées

Terres

des

Limite

Terres
cultivées

Terres

des

Limite

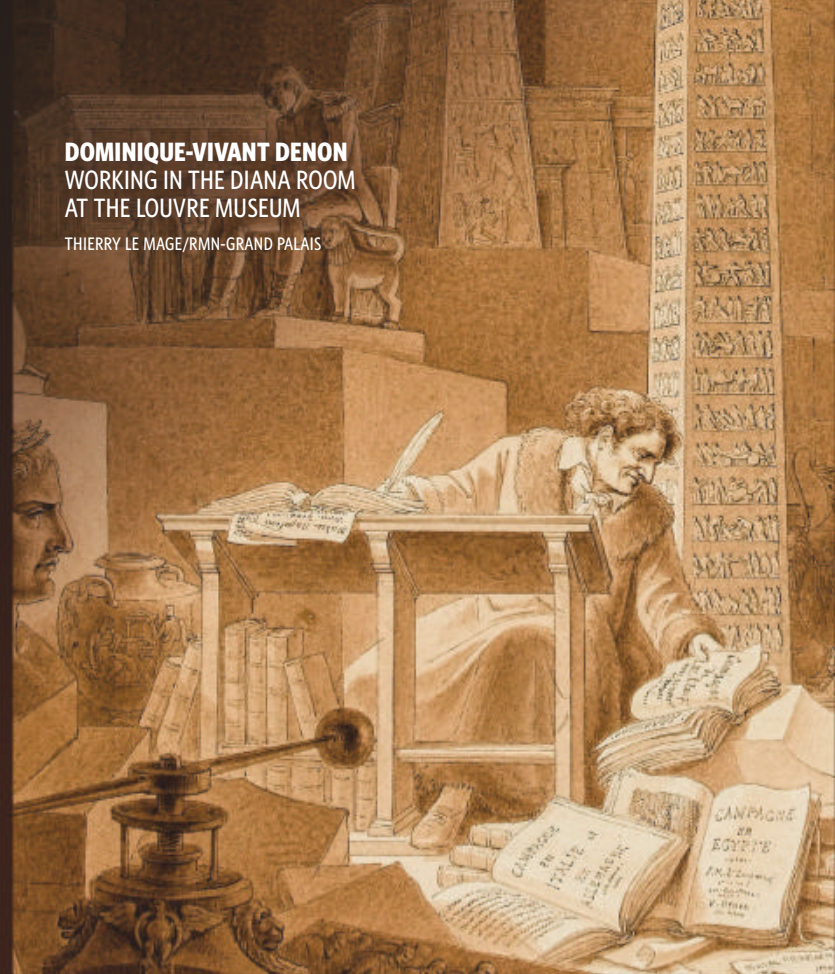
Denon, was an aristocrat and diplomat as well as a writer of libertine novels and an accomplished visual artist. While in France, he had been a regular at the parlors of Joséphine de Beauharnais, the woman who would become Napoleon's first wife. After Napoleon convinced him to join the Egyptian expedition, Denon accompanied General Desaix to Upper Egypt where he sketched and collected data on numerous pharaonic monuments in the region. When Napoleon slipped back to Paris in 1799, Denon went back with him and began to work on a book of his Egyptian adventures.

In 1802 Denon published *Travels in Lower and Upper Egypt*, which became a runaway success. His lively prose mixed the narrative of a military campaign with descriptions of mysterious ancient sites in a faraway land. Denon's illustrations were remarkable for their time. *Travels in Lower and Upper Egypt* contained more illustrations than any other book before it. While there was no precedent for the number, size, and quality of his works, there was also no precedent in terms of the subject matter. The Egyptian monuments he drew—the Colossi of Memnon, the Temple of Hathor, and the Sphinx of Giza—had never been seen in such detail. Their beauty and distinction captivated France, and audiences were hungry for more.

Denon dedicated his work to Napoleon, and the book transformed local opinion. Napoleon went from being associated with the failure of a military campaign to the leader who exposed the might and grandeur of ancient Egypt, a civilization as influential as classical Greece and Rome. Denon became director of the Central Museum of the Arts (the future Louvre Museum) and had all manner of luxury objects designed from the drawings he had brought from Egypt. Tableware, furniture, wallpaper, and other items were decorated with sphinxes, obelisks or palms, exotic images that served as propaganda for Napoleon.

British Wins, French Losses

After Denon's return from Upper Egypt in 1799, Napoleon sent more scholars to the region for more investigation of Egyptian antiquities. Despite the military turmoil, the French scholars were able to work in relative safety because they were escorted to each monument and guarded



Changing Views

Dominique-Vivant Denon's *Travels in Lower and Upper Egypt* reflects the transformation that French intellectuals experienced after being exposed to Egyptian art and architecture. A student of neoclassicism, Denon did not have high expectations for the Egyptian temples, but his opinion radically shifted when he saw Egypt's massive monuments: "I finally saw the portico of Hermopolis; and the great masses of its ruins gave me the first image of the splendor of the colossal architecture of the Egyptians: On each rock which composes this building I seemed to see engraved, *Posterity, eternity.*"



VASE MADE IN 1811, DECORATED WITH A SCENE FROM DENON'S *TRAVELS IN LOWER AND UPPER EGYPT*. PALAZZO PITTI, FLORENCE
BRIDGEMAN/ACI

CLEOPATRA'S NEEDLE,
IN ALEXANDRIA. COLOR
ENGRAVING FROM
DENON'S *TRAVELS*. TEXTS
SHOW THAT DESPITE THE
NAME, IT WAS ERECTED
BY THUTMOSE III AT THE
TEMPLE OF HELIOPOLIS.

BRIDGEMAN/ACI



during their examinations. The researchers took numerous notes, collected various artifacts, and made careful observations and detailed measurements.

After returning to Cairo, they had hoped to embark immediately for France with their collection, as Napoleon had ordered before leaving the country. But the French surrender to the British changed circumstances: British commanders demanded that the French hand over all the antiquities the commission had collected, including an inscribed black stone stela found by French soldiers in Rashid in June 1799. Although it looked rather unassuming, the appearance of hieroglyphic, demotic, and Greek inscriptions on it were intriguing. The French were forced to give it up (along with everything else), and that is how the famous Rosetta Stone and other Egyptian treasures ended up in British hands.

The commission successfully fought to keep their documentation. French naturalist Étienne Geoffroy Saint-Hilaire threatened to burn everything before giving it to the British. As part of his threat, he compared the potential conflagration to be the equal of the loss of the great Library of Alexandria. His gambit worked: The British relented and allowed the French to keep their notes.

A Colossal Publication

A few months after the return of the expeditionaries to France, Napoleon ordered that the investigations of the commission of scholars in Egypt be published in a large printed work. It was a massive undertaking, one that would take years to complete. The resulting multivolume work would feed the French appetite for ancient Egypt, begun by Denon's book.

By 1809 there were 36 people involved in writing the work and as many as one hundred engravers involved in creating illustrations. The plan called for nearly 900 copper plates containing more than 3,000 figures. Geographer Edme-François Jomard was one of the project managers of the massive work and led the committee in charge of assigning topics, receiving drafts, and editing them. The committee also made sure that the text coordinated with the images being created specially for the volume. The system did not differ all that much from today's academic journals.



**FACE TO FACE
WITH GREATNESS**

Jean-Léon Gérôme's painting "Bonaparte Before the Sphinx" captures Napoleon's instinct that the glory of ancient Egypt could be harnessed to exalt French power. Hearst Castle, San Simeon, California

AKG/ALBUM





▲ **RAMSES III** OBSERVING FROM HIS WAR CHARIOT AS SCRIBES COUNT PRISONERS. ILLUSTRATION OF PAINTED RELIEF FROM MEDINET HABU IN THE *DESCRIPTION OF EGYPT*

DANIEL ARNAUDET/RMN-GRAND PALAIS

▼ **MUSICIAN.** A SECTION FROM A RELIEF IN THE TOMB OF RAMSES III IS RENDERED IN GREAT DETAIL IN THE *DESCRIPTION OF EGYPT*.

FINE ART/ALBUM

WINGED DEITIES FROM A COFFIN FRAGMENT, FEATURED IN THE *DESCRIPTION OF EGYPT*

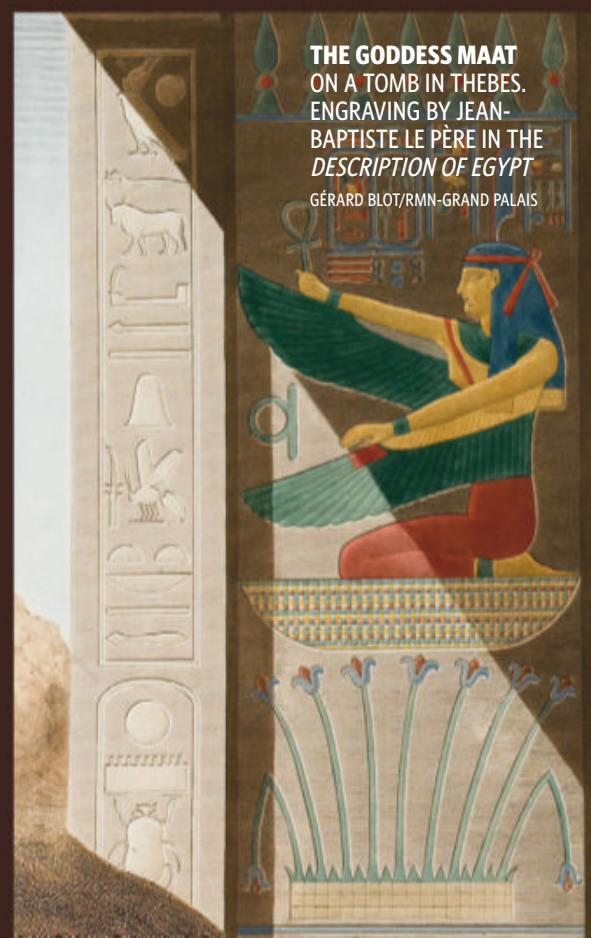
RMN-GRAND PALAIS





The Art and Science of Illustrated Works

Publishing the detailed engraved images in the *Description of Egypt* was a big challenge in the early 19th century. Their creation was only made possible by an ingenious machine invented by Nicolas-Jacques Conté, a chemist and engineer who participated in the expedition to Egypt. On his return in 1803, he was appointed head of the editorial committee for creating the published work. One of his colleagues, Edme-François Jomard, said Conté's engraving machine could perform tasks in two or three days that would have taken a traditional artist as long as six months to finish. Two of his engraving machines were used to create the magnificent illustrations, and between 80 and 100 engravers worked on them.

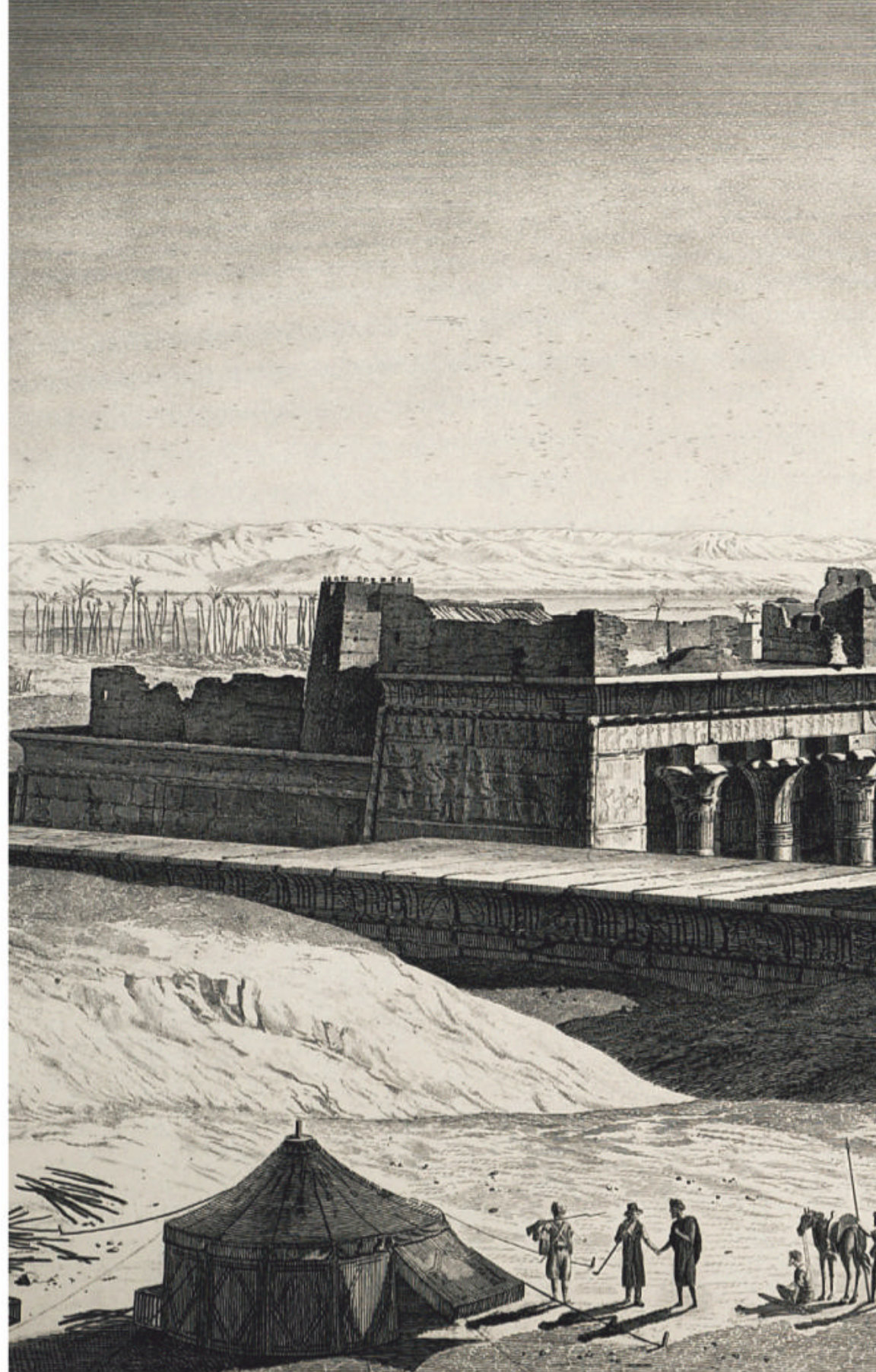


The publishers had hoped the work would be published all at the same time, but Napoleon, already crowned emperor, was growing impatient. To appease him, they decided to start serially publishing in separate volumes in 1809. The *Description of Egypt, or a Collection of Observations and Research That Was Made in Egypt During the Expedition of the French Army, Published by Orders of His Majesty the Emperor Napoleon the Great* comprises 22 volumes: nine books of text and 13 of plates, illustrations, and maps. Volumes began publishing and continued even after Napoleon was out of power. After the reinstatement of the monarchy in 1814, King Louis XVIII decided to continue work on the publication because it was an obvious badge of French national pride. The team would finish the entire set of works in 1828, after the publication of the maps, which were last to be published because they had once been considered top secret by the government.

Joseph Fourier's preface framed ancient Egypt as a cradle of civilization (a fairly new concept, conceived at the end of the 18th century) where the pyramids rose, the great Greek thinkers had studied, and the great Alexander had ruled. But he also wrote: "This country, which has transmitted its knowledge to so many nations, is currently mired in barbarism," hence the supposed need for the French conquest that was intended—so it was affirmed—to return to Egypt the benefits of a civilization that it had itself created.

Strengths and Weaknesses

The contents of the *Description of Egypt* are divided into three major sections: antiquities, natural history, and the modern state, with volumes of text and images for each. More than half the work is devoted to the past and shows how the untold history of the pharaohs had captured the imagination of the scholars. Their fledgling historical interpretations were hindered by the inability to understand hieroglyphs, which prevented the creation of a chronological presentation. The first two volumes were organized geographically, from south to north, from the island of Philae in Upper Egypt to the Nile Delta. In the third and fourth volumes, articles were organized by theme. Scholars attempted to compare the

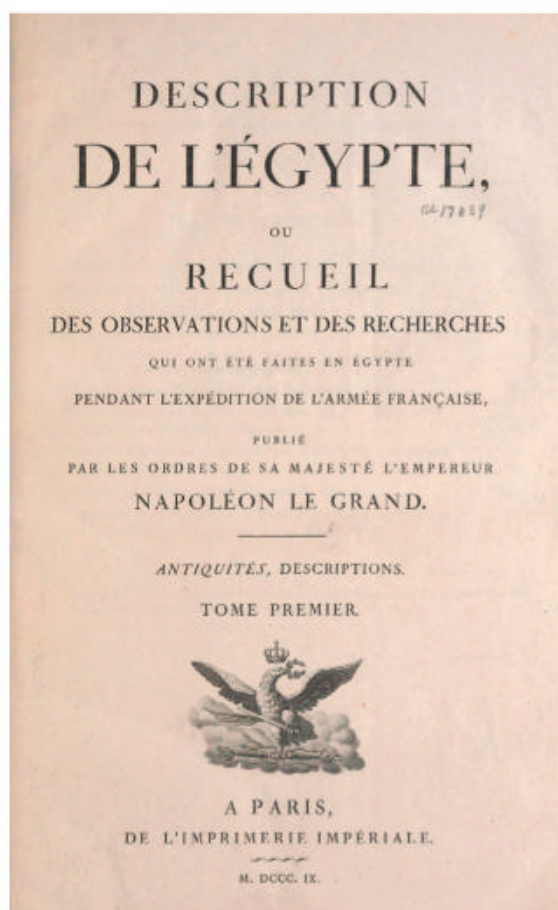


Moments in Time

The drawings made by the French scientific expedition capture how the treasures of ancient Egypt appeared during the late 18th century before any had been excavated. André Dutertre's rendering of the Ptolemaic Temple of Horus at Edfu (above) shows the exposed, yet well preserved, upper portions of the structure while the lower are still buried by mounds of desert sand. An engraving by Jean-Baptiste Réville shows how the Temple of Luxor (commissioned by Amenhotep III in the 14th century B.C.) looked when the French first observed it (right) in the 1790s. Two obelisks still flanked the entrance (the one on the right would later be moved to France in 1831), and sand has consumed more than half of two colossi seated next to each one.

BOTH ENGRAVINGS: RMN-GRAND PALAIS





TITLE PAGE FROM THE FIRST VOLUME OF THE *DESCRIPTION OF EGYPT*, 1809

LLP COLLECTION/ALAMY

narratives of classical authors with the remains of Egypt's still visible monuments.

For many modern scholars, the most enduring value of this work lies in the illustrations, for their fidelity and aesthetic dimension, accentuated by their enormous size. They mark the start of academic archaeology in the Nile Valley. The topographical plans are exceptional. There are plans, elevations, sections, and precise measurements of monuments. The aim was to facilitate their study without the need to travel to Egypt. About 20 of the buildings depicted have since disappeared and all that remains of their appearance are the figures and explanations in the *Description*.

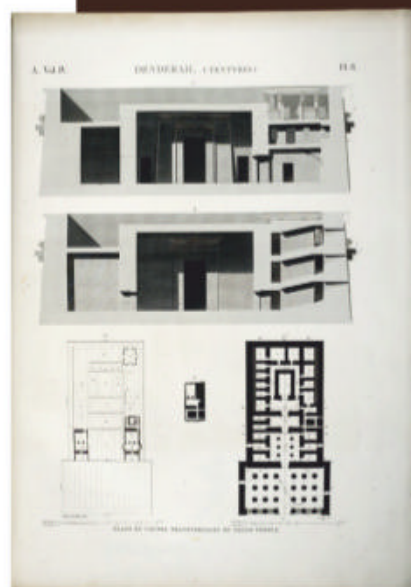
Napoleon's French expedition marked the turning point when the European public and academic imaginations became obsessed with exploration of ancient Egypt. The 1799 discovery of the Rosetta Stone led to Jean-François Champollion's deciphering of hieroglyphics in the 1820s. His work was the key to a new understanding of ancient Egyptian civilization, as scholars could better interpret monuments and antiquities, leading to a more detailed rendering of this colossal ancient power and its people. ■

MIGUEL ÁNGEL MOLINERO IS ASSOCIATE PROFESSOR OF EGYPTOLOGY AT LA LAGUNA UNIVERSITY, TENERIFE, SPAIN.



THE DANDARA ZODIAC, AS REPRODUCED BY JOLLOIS AND DEVILLIERS, IS ONE OF THE TEMPLE'S MOST ICONIC FEATURES.

BRIDGEMAN/ACI



BRIDGEMAN/ACI

Temple of Dandara

On his pioneering journey through Upper Egypt, Denon was fascinated by the Temple of Dandara, which he considered superior to any monument in ancient Greece. He showed his sketches of the temple to two young assistants, Jean-Baptiste Prosper Jollois and Édouard Devilliers du Terrage. In a second expedition, organized for academic purposes, both men visited what was then believed to be a temple of Isis (later study revealed it was actually dedicated to Hathor).

Using engineering principles, they were able to produce topographic surveys of the site, detailed architectural plans (above), and remarkably precise drawings of the structures and their art. When working inside the temples, they had to use torches for light, which made the work "long and arduous," according to Devilliers.



TEMPLE PORTICO. THE COMPLEX ARTWORK ADORNING THE TEMPLE OF HATHOR IS CAPTURED IN AN ENGRAVING BY DEVILLIERS FEATURED IN THE *DESCRIPTION OF EGYPT*.

DEA/GETTY IMAGES



THE TEMPLE OF HATHOR
IN DEIR EL MEDINA
IS DEPICTED IN RICH
DETAIL IN A COLORIZED
ENGRAVING FROM THE
DESCRIPTION OF EGYPT.

DEA/AGE FOTOSTOCK

SEE, SKETCH, EXPLORE

In many engravings in the *Description of Egypt*, the French scholars literally inserted themselves in their work. They depict how they sketched monuments, took notes, excavated ancient sculptures, and explored temples. Their presence helps show the scale of these objects as well as saves personal memories of a great archaeological adventure.



▲ *The Island of Philae*

Expedition members stand between Trajan's Kiosk (right) and the Temple of Isis.

▼ DEA/GETTY IMAGES

▲ *Tomb of Paheri in El Kab*

A French scholar draws the statues in the tomb of a high official of the 18th dynasty.

DEA/ALBUM





▲ *A Giant Hand*

French workers prepare to relocate a colossal hand that was once part of a massive granite statue.

DEA / ALBUM

The Great Pyramid ►

Architect Jacques-Marie Le Père observes a worker from the foot of a ladder in the Great Pyramid of Khufu.

RMN-GRAND PALAIS



The Frozen Kurgans of Pazyryk

The permafrost of the Siberian steppe trapped ancient Scythian tombs in an icy time warp. Unearthed by Soviet teams in the early 20th century, the burial mounds of the Pazyryk Valley yielded a frozen trove of well-preserved mummies and artifacts.

Fifth-century B.C. Greek author Herodotus wrote about an unusual royal burial he observed while visiting the Scythians, the nomadic warriors of the Eurasian steppes. He observed a king's corpse being eviscerated, its cavities filled with herbs, and the body borne on a cart to be buried in a great square pit. Horses, and even servants, were sacrificed and their bodies laid nearby, along with golden cups, "after which they raised a vast mound above the grave."

Many classical scholars regarded Herodotus as more of a fabulist than a historian. Archaeology, however, is revealing that he got a lot



right about the Scythians. In 1865 Russian scholar Vasily Radlov excavated a large burial mound (known as a *kurgan* in Russian) in the Altay Mountains, near Berel in Kazakhstan. Opening the mound, Radlov peered into a frozen vault preserving an ancient culture.

Situated close to where the modern borders of Mongolia, Russia, Kazakhstan, and China meet, the mounds' contents had been frozen, preserved for many centuries in what archaeologists called an "ice lens."

Through it, Radlov and later scholars have been able to discern remarkable details about this culture. Later named the Pazyryk culture, its magnificent Iron Age burials on the southern Siberian steppe contained—as Herodotus had written—embalmed royal bodies, golden treasures, and sacrificial horses.

Steppes in Time

Originating perhaps in Persia around 1000 B.C., the Scythians then fanned out west across the steppes to the Black Sea. They were a nomadic people recognized for their brilliant equestrianism and archery skills.

By the 19th century archaeologists were beginning to piece together a fuller idea of their culture from finds on the western edge of the Scythian world. Radlov's 1865 discovery of the

deep-frozen Scythian objects of wood, leather, and metal allowed scholars to begin studying a site that exhibited general Scythian traits and also showed influences from Persian, Chinese,

THIS BURIAL site in Russia's Altay Mountains was excavated in 1993. It contained the frozen remains of an elite woman, a Pazyryk Scythian who lived in the fifth century B.C.

GEORG GERSTER/AGE FOTOSTOCK



1865

Vasily Radlov excavates a large kurgan at Berel in Kazakhstan, whose contents are frozen.

1924

Sergei Rudenko, director of a dig in Russia's Pazyryk Valley, finds icebound kurgans.

1929

In Kurgan 1 at Pazyryk, human remains, grave goods, and sacrificial horses are found.

1947

Rudenko returns to Pazyryk. Grave goods and tattooed bodies are found in Kurgans 2 and 5.



COLD COMFORT

THE PAZYRYK SCYTHIANS may have been calculating that the cold conditions would preserve their dead. Hacking more than a few feet into the permafrost soil would have been like digging into rock. The rains of the first fall after burial would have flooded the chamber, and turned to ice in the following winter. The layer of rocks over the kurgan insulated the burial through the summer months for centuries.

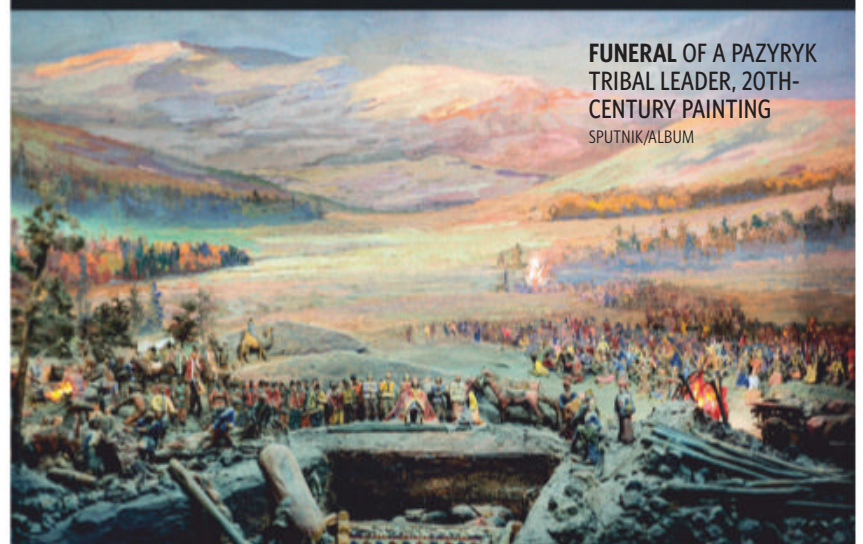
and Greek cultures.

Decades later, in 1924, Soviet archaeologist Sergei Rudenko began work in Russia's Pazyryk Valley, not too far from Radlov's find at Berel. Among the Scythian structures in the valley (including alignments of hammered stones) were found more kurgans.

The interior of the mound Rudenko called Kurgan 1 was believed to be frozen. When it was finally opened in 1929, there were signs

that it had been looted at some point in the distant past, but disappointment subsided when the team discovered that the tomb (nearly 150 feet in diameter and some 13 feet high) was an ice lens. The burial chamber, built from larch logs, was packed with solid ice.

After it was thawed with boiling water, a scent of resin rose from the ancient logs. Looters had taken objects believed to be of value, but the coffin remained. This



FUNERAL OF A PAZYRYK TRIBAL LEADER, 20TH-CENTURY PAINTING
SPUTNIK/ALBUM



◀ **Saddle cloth**
Two women pray before an altar in a detail from a blanket believed to be of Persian origin. (Kurgan 5)

CM DIXON/AGE FOTOSTOCK

Left Behind

ALTHOUGH ALL the Pazyryk kurgans showed some signs of looting, a significant number of the grave goods had been preserved, especially in Kurgans 2 and 5. Some objects could have been protected by being too deeply embedded in the ice to extract. In Kurgan 5 objects placed alongside the horses seemed to have been overlooked by the looters and remained for archaeologists to uncover.



▼ **Mummified man**
believed to be about 55 years old, and perhaps the tomb's main occupant (Kurgan 5)

SOVFOTO/AGE FOTOSTOCK

▲ **Funerary carriage**
(reconstructed from fragments found at the site) used to transport the corpse (Kurgan 5)

PRISMA/ALBUM



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Well Preserved by a Deep Freeze

WHILE METALWORK has been found in abundance at other Scythian sites, Pazyryk stands out for the remarkable diversity of its artifacts. The cold climate preserved materials like wood, leather, and textiles that would have decayed in warmer conditions.



◀ **Bridle plaque**, featuring birds and beasts. Carved horn. (Kurgan 2)
CM DIXON/AGE FOTOSTOCK

Bridle ornament in the form of an ibex. Wood carving. (Kurgan 1)
FINE ART/AGE FOTOSTOCK



◀ **Leather mask** with antlers found on one of the sacrificial horses (Kurgan 1)
PRISMA/ALBUM



▲ **A leather sole** of one of the boots of a woman buried in Kurgan 2
BOLTIN PICTURE/BRIDGEMAN/ACI

huge vessel contained some human remains. On one side of the chamber lay the skeletons of 10 horses, sacrificed, it is now calculated, more than 2,200 years ago.

Further exciting discoveries seemed likely—but a year later the brutal realities of Soviet rule intervened. Rudenko was unexpectedly arrested in 1930 and sentenced to 10 years in a forced labor camp.

Return to the Kurgans

Rudenko didn't serve the entire sentence and was released in the mid-1930s. World War II delayed further investigations at the

Pazyryk site. Only in 1947, was Rudenko finally allowed to return to the valley.

Over the course of three summers, he and his team excavated the four remaining large burial mounds. All had been looted, but Kurgans 2 and 5 retained several unique pieces, including well-preserved textiles. Among them was what many believe is the oldest pile carpet, possibly of Persian origin, and a large tapestry of felt and silk from southern China. The objects reflect the wide-ranging cultural influences that shaped the Scythians' world.

In Kurgan 5 a complete

but disassembled wooden funeral carriage was found. Several mummified bodies were also documented. Because of the intense cold, their bodies had been perfectly preserved, allowing archaeologists to see and study their elaborate tattoos as well as intact hair styles.

The Pazyryk culture that built these mounds thrived from the sixth to the third centuries B.C. Initial dating placed the oldest of the Pazyryk barrows in the fifth century B.C., but later scientific studies (including tree-ring dating of the wooden artifacts found at the sites) place them in the fourth to

third centuries B.C.

The sites continue to yield rich finds. In 1993, not far from where Rudenko excavated, the mummified body of a high-born Pazyryk Scythian woman—dubbed the Siberian Ice Maiden—was found in one of the few kurgans to contain a lone woman.

A marked trend of warmer winters has raised fears that the deep-frozen riches of the Pazyryk Valley are threatened. Scholars fear that many undiscovered ice lenses may be destroyed by the effects of climate change.

—Borja Pelegero

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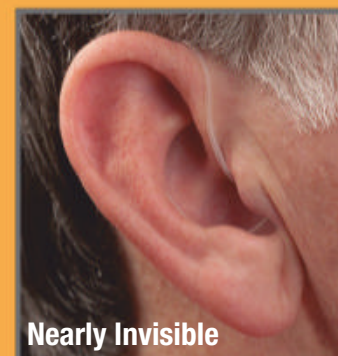
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MAGELLAN PASSING THROUGH THE STRAIT THAT NOW BEARS HIS NAME, IN AN 1880 COLORED WOODCUT

ALBUM/AKG

MAGELLAN'S GLOBAL JOURNEY

FIVE CENTURIES ago, Ferdinand Magellan was killed in the Philippines, but his crew would continue their journey and complete the first known circumnavigation of the globe in 1522. A Portuguese explorer who sailed under the Spanish flag, Magellan was seeking a western route to the Spice Islands (today's Maluku Islands of Indonesia). Before his death, he overcame attempted mutinies and navigated his flotilla through a perilous strait (that now bears his name) to reach the Pacific.

IN SEARCH OF CELTIC CULTURE

THE QUESTION OF WHO the Celts were and where they came from remains a controversial issue in European prehistory. During the late Bronze Age, the Celts are believed to have emerged from central Europe and settled at sites in modern France, Italy, Spain, and the British Isles, where archaeologists would later uncover exquisite metal artifacts bearing distinctive Celtic motifs. Although the Celts' influence would wane when Rome began to expand, their grip on the modern imagination remains strong—while scholars continue to debate whether or not there even was a unified Celtic culture.

CELTIC SCABBARD, IRON AND BRONZE. SWITZERLAND. FIFTH TO FIRST CENTURIES B.C.
BERTHOLD STEINHILBER/LAIF/CORDON PRESS



Ancient Egypt's Divine Menagerie

The Egyptian pantheon had gods who looked like people, and many who looked like animals—from Sekhmet, a lion-headed war goddess, to Horus, the falcon sky god. These deities were worshipped for the characteristics they embodied, revealing a spiritual connection between the human and natural worlds.

Empress Agrippina, Ruler of Rome

Spurning tradition, Agrippina refused to play a submissive role in the early days of the Roman Empire. Sister to an emperor, wife to another, she was a political power player in her own right, working behind the scenes to maneuver her young son, Nero, to the throne, and then ruling in his name.

The Medieval Mania for Relics

Holy relics—like pieces of the True Cross or the tongue of St. Anthony of Padua—were prized not only by the faithful but also by those who profited from them. Church attempts to regulate their sale were largely unsuccessful, and notorious scams and scandals later fueled dissent and outrage.

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